AUG 3 0 1985

HE23.3002: C 73/3

ORIGINAL
COMPLETED
332.

ADAPTING COMPUTER-ASSISTED INSTRUCTION TO MEET THE NEEDS OF ELDERLY JOB-SEEKERS

OPERATION ABLE
36 South Wabash Avenue,
Suite 1133
Chicago, Illinois 60603

July 15, 1985

Award #90-AD-0009

Ja

ADAPTING COMPUTER-ASSISTED INSTRUCTION TO MEET THE NEEDS OF ELDERLY JOB-SEEKERS

OPERATION ABLE
36 South Wabash Avenue,
Suite 1133
Chicago, Illinois 60603

July 15, 1985

Award #90-AD-0009

ADAPTING COMPUTER-ASSISTED INSTRUCTION TO MEET THE NEEDS OF ELDERLY JOB-SEEKERS

FINAL REPORT

Prepared by:

Marilyn L. Flynn, Ph.D., Associate Projector Director
School of Social Work
University of Illinois at Urbana-Champaign

Louis V. DiBello, Ph.D., Senior Technical Specialist
Computer-based Education Research Laboratory
University of Illinois at Urbana-Champaign

with

Shirley Brussell, Project Director
OPERATION ABLE
Chicago, Illinois

July 15, 1985

This project was supported, in part, by award number 90-AD-0009 from the Administration on Aging, Office of Human Development Services, Department of Health and Human Services, Washington D.C. 20201. Grantees undertaking projects under government sponsorship are encouraged to express freely their findings and conclusions. Points of view or opinions do not, therefore, necessarily represent official Administration on Aging policy.

ADAPTING COMPUTER-ASSISTED INSTRUCTION TO MEET THE NEEDS OF ELDERLY JOB-SEEKERS

Abstract

Recent gains have been made in targetting content of employability skills development programs to the special needs of the older job-seeker. Yet there has been conspicuous absence in the use of one of the most powerful instructional supports developed in this century: the computer. The overall goal of this project was to analyze how employability skills development programs can use computer-assisted instruction (CAI) to enhance prospects of job-seeking success for the elderly. Specific objectives were (1) to examine the consumer response and employment-related effects of CAI used in conjunction with traditional classroom and counseling methods for job search skills training; and (2) to stimulate industry and government involvement in the dissemination of software which was adapted by this project for older job-seekers.

Data were obtained over a 12-month period from 701 project participants at three research sites: Operation ABLE in Chicago, Illinois; Waxter Senior Center, Baltimore, Maryland; and the Minneapolis Senior Federation in Minnesota. Programs serving the economically disadvantaged, unemployed clerical workers and professional/managerial clients adopted a CAI component at ABLE, while specially designed projects were set up for shorter periods of time (4 months) at Baltimore and Minneapolis. Clients at the Baltimore site were the oldest (average age, 63), most likely to perceive themselves as retired, and to have been out of the labor market for longer than 1 or 2 years. Approximately 3/5ths of project clients were female, most of whom (80%) were minorities. Nearly all of the males were white. Eighty-Four percent of the clients had 12 or more years' education.

Follow-up interviews were conducted with 56% of all clients to determine job status. Other data on extent of computer use, satisfaction, client characteristics, and suggestions for software revision were obtained both on-line and through written assessment instruments. Software was delivered on the University of Illinois PLATO system with terminals at ABLE and the Minneapolis Senior Federation connected to the university's mainframe. PLATO services and equipment at the Waxter Senior Center were provided by the University of Maryland-Baltimore PLATO system.

Several significant study findings were obtained. Older workers required minimal orientation to computer-assisted instruction and were almost universally enthusiastic about the experience. This finding applied irrespective of age, educational status, sex, or race. Minorities in the project were predominantly females, likely to see themselves as retired, had experienced longer spells of unemployment, and tended to be less well educated. They were more likely than whites to be receptive to the idea of career change. Despite the relatively greater handicap of advanced age, lesser education, and lengthier unemployment, minorities were as likely as whites to have found employment 30 days post-training. Controlling for race, minorities who found employment used computer-assisted instruction more than did unsuccessful minority job-seekers. Women who successfully found work were likely to have used CAI more than women who were still jobless 30 days post-training. Significant differences were observed in patterns of lesson usage on the computer by race, sex, education, age and retirement status. Not all of these differences can be explained in terms of assigned "menus." Project results suggest that the potential of CAI for increasing labor supply of retired workers and for enhancing the employment potential of minority elderly is promising.

POLICY AND PROGRAM IMPLICATIONS PAPER

Local program design and service delivery for unemployed older persons. Local programs in the aging network often suffer from staff turnover, lack of experience in the delivery of employment-related services, and lack of access to current labor market information. On the other hand, older people are more likely to use neighborhood based services. One solution is to stimulate the use of CAI for employability skills training and provision of regional or local labor market information. Programs serving older women may, in particular, find this strategy of significant benefit.

Technical assistance over a 1-2 year period should be made available through Area Agencies on Aging, state units on aging, ABLE networks, and/or through a federal clearinghouse function on technology applications. With the imminent disappearance of federal revenue sharing funds and a growing reluctance among foundations to support new hardware purchases, local agencies will also need guidance on acquisition policies and alternative funding sources. The increasing available of used or donated equipment through private corporations represents one potential avenue.

State agency roles. State governments have the capacity to market automated occupational and labor market information systems to local agencies, to conduct statewide user meetings, provide on-going technical assistance, and coordinate multiple units of state services. The potential for using remote terminals connected to a state-owned mainframe is also being explored in some fields (e.g. child welfare.) State units on aging should be encouraged to take leadership in these areas through special research and demonstration grants from the Administration on Aging. It should be emphasized that model projects will be essential to diffusion of innovation, particularly in the instance of computer applications for direct employment-related services to the elderly. The uses of CAI in contributing to a reduction of persons receiving General Assistance or state-supplemented SSI payments also is a fruitful area for jointly supported state/federal research initiatives. It is likely that private foundations would also be interested in participating in a study of this kind.

Federal policies and initiatives. The project has demonstrated what may perhaps be the most significant federal role in promoting new uses of technology by older persons -- that of support for future software development. Software design as well as content are twin elements which must be equally addressed. The purpose of this project was to adapt existing software, which was done. However, most software in this country has been developed on the drill-and-practice model which was (and remains) the most widely accepted design. The project has shown that new software, using programming techniques more familiar to those working with "expert systems" and artificial intelligence, are best suited for teaching complex social skills to older persons, who have so many pronounced individual differences. New programming languages have recently been invented which would be directly applicable to this problem. The project has also confirmed that content of software must not just be modified but written afresh, in order to respond to the special concerns of older persons in the labor market. Finally, a total framework for project management using CAI needs to be conceptualized for agencies with different organizational and client characteristics. The federal government has hitherto emphasized its dissemination role for products and ideas, but in the case of technology applications, developmental support at this juncture would be more productive.

Dissemination and Utilization Summary

1. Private Sector Contacts

A key dissemination step is appropriate packaging of program materials. Products available for dissemination from this project include: (1) a set of computer-assisted teaching lessons in employability skills and occupational guidance support (5 new lessons and 10 adapted lessons); (2) A complete two-volume instructors program manual which includes detailed activity schedules for each of six class sessions, all paper materials, descriptions of role play and other group exercises, facsimiles of computer screens, theoretical and conceptual background, tips for the instructor, physical environment set-up, and supplementary program materials and references to books and other information sources; and (3) a one-volume computer training manual for instructors which describes how to set up new student records, prescribe appropriate menus, and check progress statistics.

Private foundations have been informed about this project and asked to help. Levi Strauss has funded Operation ABLE for replication activities (which now include this computerized component). Mott Foundation has expressed interest in having a project presentation at an annual conference on Technology and the aging. Both Mott and Bush Foundations have provided funds to help the Metropolitan Senior Federation continue its program.

Control Data Corporation was contacted and asked to consider acquiring program products (software and off-line program materials) for publication and marketing through its Education Company. They have expressed specific interest in this program, and negotiations are continuing. Even though the process is likely to be long and complicated, CDC represents a very hopeful possibility for wide-scale dissemination.

Project software is currently operating and available on the University of Illinois PLATO system and the University of Maryland PLATO system. UI PLATO network already reaches 1,300 terminals nationwide, of which 300 serve HHS-targetted populations. For example, the Illinois Occupational Information Coordinating Committee is now able to target programs for the elderly as one of its market segments for statewide occupational information services. UI PLATO expects a four-fold expansion within the next two years and a significant drop in costs of UI PLATO to agencies. This should enable more programs that serve elderly job seekers to take direct advantage of project software. Any expansion automatically extends the availability of project software.

The two-volume Program Manual and accompanying one-volume staff Computer Manual are available now at reproduction costs, and provide a basis for program replication.

Authoring systems for translating project software from PLATO to other major systems such as the IBM PC and APPLE have been identified. DUOSOFT Corporation, a small software development house, was contacted to provide a sample conversion of the software and to then approach established publishing houses. DUOSOFT has made two such presentations with positive results to IBM and to McGraw Hill.

LINC Associates has been contacted, and information collected about its dissemination services under an HHS contract. A meeting was held with the director of LINC to describe project results.

2. Public Sector Dissemination Activities.

As described above, two large state university PLATO systems (Universities of Illinois and Maryland) currently have project software available and operating. One consequence of that is a new capability for at least one state entity (the Illinois Occupational Information Coordinating Committee) to better target programs for elderly in its statewide marketing of occupational information. In addition, an extensive program of public presentations was carried out during this project. A list follows:

1. May 29-30, 1984: Washington, D.C. - HHS Meeting for Administrative staff and other agency staff.
2. June 18-19, 1984: Helena, Montana - Governor's Council on Aging andand Dept of Labor, Employment and Training Division; a videotape of the project was shown; eighty trainees.
3. August 2-3, 1984: Chicago - Region V Training Session for Area Agency and state staff; 125 from six states.
4. September 30 - October 2, 1984: Chicago - Illinois Department on Aging, statewide conference.
5. October 2, 1984: Minneapolis - APWA Central States Regional Conference.
6. October 23, 1984: Denver - Governor's Older Worker Conference.
7. November 16, 1984: Chicago - Women In Charge Conference.
8. November 19, 1984: Kansas City - Mid-America Conference on Aging.
9. December 3, 1984: Washington, D.C. - HHS Update Session.
10. ABLE Job Fair - June 14, 1984.
11. ABLE presentations on 5 radio shows; 13 newspaper articles; and two local agencies demos (with terminal).

TABLE OF CONTENTS

page

Cover Page
Title Page
Table of Contents i III
Table of Tables iii V
Executive Summary v VII

I. INTRODUCTION 1
  A. Description of Problem 1
  B. Literature Review and Assessment 2
  C. Concepts and Assumptions Underlying Problem Investigated 8
  D. Definition of Key Terms 9
  E. Objectives of the Project 10
  F. Project Auspices 11

II. METHODOLOGY 13
  A. Project Design 13
  B. Implementation Model 14
  C. Methods of Data Collection 21
  D. Generalizability of Findings 22
  E. Significance of Target Population to AOA Programs 23

III. PROJECT OUTCOMES 25
  A. Research Findings 25
    1. General Sample Characteristics 25
    2. Differential Characteristics and Patterns of Program Experience by Sex and Race of Clients 31
    3. General Patterns of Computer Use and Client Response 33
    4. Program Impacts on Job-Seeking and Job-Finding Activities of Project Participants 41
  B. Dissemination Results 51
    1. Program Packaging 51
    2. Private Sector Contacts 52
    3. Public Sector Contacts 56
  C. Program Development Results 57
    1. New Software Developed 57
    2. Revisions to Existing Lessons 58

IV. DISCUSSION AND IMPLICATIONS OF RESULTS 61
  A. Significance of Project Results in Relation to the Usefulness of CAI for Older Job-Seekers 61
  B. Problems Encountered 63
  C. Implications of Unexpected Findings 65
  D. Implications for Theory and Practice 68
  E. Significance for Communities, States and Public Policies 69

V. SUMMARY 73

VI. BIBLIOGRAPHY 75

VII. APPENDICES Page

1 DATA COLLECTION INSTRUMENTS 79

Initial Assessment Form 80
Follow-up Form 83
Daily PLATO log-off-line 89
Example of Automated Data Collection Records s 90

2 PLATO CAREER INFORMATION SYSTEM AND THE ILLINOIS BUSINESS AND INDUSTRY PROFILES: SELECTED SCREEN COPIES 91

PLATO Career Information System 92
Illinois Business and Industry Profiles 130

3 NEW LESSON DEVELOPMENT 136

Screen Displays of Revised Menus 137
Functional Resume Lesson 143
Interviewing the Employer 164
Questions You Don't Have to Answer 202
Getting Along on the Job 211
Where to Look for Jobs 215
How to Fill Out a Job Application Form 219

4 EXAMPLES OF ON-LINE SUGGESTIONS THROUGH COMPUTER CONFERENCING AND ELECGRONIC MAIL FOR LESSON REVISION 228

5 EXCERPTS FROM TRAINING MANUAL FOR CAI-SUPPORTED EMPLOYABILITY SKILLS PROGRAMMING 281

iv

TABLE OF TABLES

Table		Page
1	REFERRAL FLOW OF CLIENTS TO PROJECT OPERATION ABLE	14
2	SCHEDULING, RESEARCH INTERVENTIONS, AND NUMBER OF CLIENTS IN PROJECT AT WAXTER SENIOR CENTER	17
3	SUMMARY OF SITE CHARACTERISTICS: OPERATION ABLE, WAXTER SENIOR CENTER, AND MINNEAPOLIS SENIOR FEDERATION	18
4	NUMBER AND PERCENTAGE OF CLIENTS SERVED BY RESEARCH SITE AND PROGRAM, October 1984--January 1936	25
5	RACE OF PROJECT PARTICIPANTS AT OPERATION ABLE, WAXTER SENIOR CENTER, AND MINNEAPOLIS SENIOR FEDERATION	26
6	EDUCATIONAL ACHIEVEMENT OF PROJECT PARTICIPANTS AT OPERATION ABLE, WAXTER SENIOR CENTER, AND MINNEAPOLIS SENIOR FEDERATION	27
7	DURATION OF CURRENT UNEMPLOYMENT FOR PROJECT PARTICIPANTS AT OPERATION ABLE, WAXTER SENIOR CENTER, AND MINNEAPOLIS SENIOR FEDERATION	28
8	INTEREST OF PROJECT PARTICIPANTS IN POSSIBLE CAREER OR JOB CHANGE: OPERATION ABLE, WAXTER SENIOR CENTER, AND MINNEAPOLIS SENIOR FEDERATION	28
9	LABOR MARKET STATUS OF PROJECT PARTICIPANTS AFTER TRAINING: OPERATION ABLE, WAXTER SENIOR CENTER, AND MINNEAPOLIS SENIOR FEDERATION	28
10	COMPARISON OF CLIENT CHARACTERISTICS IN ABLE OLDER WORKER INSTITUTE, WAXTER SENIOR CENTER, AND MINNEAPOLIS SENIOR FEDERATION	29
11	MOST-FREQUENTLY USED COMPUTER-BASED LESSONS BY NUMBER OF USERS AND MINUTES OF USE: OPERATION ABLE, WAXTER SENIOR CENTER, AND MINNEAPOLIS SENIOR FEDERATION	34
12	CLIENT JUDGMENTS ABOUT EASE OF USE AND HELPFULNESS OF COMPUTER-BASED LESSONS	36
13	PATTERNS IN USE OF MOST FREQUENTLY STUDIED COMPUTER-BASED LESSONS: OPERATION ABLE, WAXTER SENIOR CENTER, AND MINNEAPOLIS SENIOR FEDERATION	37
14	CHARACTERISTICS OF SUCCESSFUL JOB-SEEKERS COMPARED TO AGGREGATE CLIENT STATISTICS, OPERATION ABLE, WAXTER SENIOR CENTER, MINNEAPOLIS SENIOR FEDERATION	42

TABLE OF TABLES
(Continued)

Table		Page
15	CHARACTERISTICS OF OLDER PERSONS STILL ACTIVELY SEEKING EMPLOYMENT COMPARED TO AGGREGATED CLIENT STATISTICS: OPERATION ABLE, WAXTER SENIOR CENTER, MINNEAPOLIS SENIOR FEDERATION	43
16	CHARACTERISTICS OF PERSONS OUT OF THE LABOR MARKET POST-TRAINING COMPARED TO AGGREGATED CLIENT STATISTICS: OPERATION ABLE, WAXTER SENIOR CENTER, AND MINNEAPOLIS SENIOR FEDERATION	44
17	DEMOGRAPHIC CHARACTERISTICS AND PROGRAM OUTCOMES FOR CLIENTS AT WAXTER SENIOR CENTER WITH AND WITHOUT COMPUTER-ASSISTED INSTRUCTION	46
18	MEDIAN TIME ON PLATO AND LIKELIHOOD OF MINORITY EMPLOYMENT BY PROGRAM: OPERATION ABLE, WAXTER SENIOR CENTER	47
19	MEDIAN TIME ON PLATO AND LIKELIHOOD OF EMPLOYMENT BY EDUCATION: OPERATION ABLE, WAXTER SENIOR CENTER	48
20	MEDIAN TIME ON PLATO AND LIKELIHOOD OF EMPLOYMENT BY SEX: OPERATION ABLE, WAXTER SENIOR CENTER	50

ADAPTING COMPUTER-ASSISTED INSTRUCTION TO MEET THE NEEDS OF ELDERLY JOB-SEEKERS

Executive Summary

The overall goals of this project were to demonstrate how employment programs serving the older worker can use computer-assisted instruction and guidance to improve program outcomes. Specific project objectives were (1) to examine the consumer response and employment-related effects of computer-assisted instruction used in conjunction with traditional classroom and counseling methods for job search skills training; and (2) to stimulate industry and government involvement in the dissemination of software which was adapted by this project for older job-seekers.

Data were obtained from 701 clients at three research sites: Operation Able in Chicago, Illinois; Waxter Senior Center in Baltimore, Maryland; and the Senior Federation of Minneapolis, Minnesota.

Three-fifths of the project participants were female, and half were minority group members (principally blacks.) Median age was 57, with a range from 40-86. Over 4/5ths had completed 12 or more years of education and were better educated than would be expected for this cohort. Fewer than 15% saw themselves as retired, with the exception of clients at the Waxter Senior Center, where the population was older (median age=63) and often at least partially retired. The majority of all project participants had been unemployed for one year or longer, were interested in full-time work, and were ambivalent or unwilling to consider career changes. Women in the sample had significantly less job experience than men, were more likely to have suffered lengthy unemployment, were less committed to full-time jobs, and were slightly more flexible about considering alternative job objectives. There was a strong association between age and race of participants. White clients were concentrated somewhat more heavily in the 50-59 age range, while minorites were most heavily represented in the over-60 age group and among those 40-49. Minorities had significantly less education than white, were more prone to view themselves as retired, and had longer periods of unemployment. Most of the minorities in the project were women; the majority of whites were men.

Planned use of CAI varied from 10-25% of total program time at the three sites, with maximum computer usage occuring at Waxter Senior Center (6 hours' median client use.) Median time spent on the system by clients was 87.6 minutes with a range from 7 minutes to more than 45 hours. About 8% of all clients used the system for 7 or more hours -- that is, with high intensity. For the majority, however, this was not possible due to other classroom demands in the programs for which they were enrolled. The average time per lesson by each participant was about 40 minutes. Women and minorities were most likely to complete more than one lesson; men were more apt to do only 1 lesson or none at all. Minorities were disproportionately represented among those who received no PLATO experience at all. It is not known whether this was a result of self-selection, counselor selection, or other factors. Those with least education also were prone to use PLATO least.

There was high consensus among clients on ease of use and helpfulness of the lessons which they tried. One of the important findings of the study was that clients responded positively to this experience irrespective of special program, research site, or demographic characteristics. Dissatisfaction, where it was present at all, was found among the professional/managerial/technical program participants in ABLE's Older Worker Institute. This group tended to feel that there was less software available which was appropriate for their needs -- but they also had less program time allotted for exploration and fewer opportunities to return to the machine after an initial orientation.

Significant differences in patterns of lesson usage were noted. Females and minorities were more likely to use less sophisticated lessons on filling out a job application or searching for work, while whites and males were most apt to look at the PLATO Career Information System (CIS) and the Illinois Business and Employer Profiles. To some extent, this reflected a difference in the pattern of lesson selection recommended by the University of Illinois, based on purposes for which programs were originally written. Nevertheless, it is not clear at this point why so few women and blacks were encouraged to use CIS. Client response does not seem to account for the differences, because users were uniformly positive about this lesson and no differences were found by sex or race.

Of the 701 project participants, follow-up post-training interviews were sought with 375 to determine their status in the labor market. Remaining clients could not be reached or did not use the computer as part of a regularly recurring, structured plan for job attainment.

Thirty days after completion of employability skills training, 136 persons (36.3%) were working. Among the other 239 persons, it was possible to confirm that 41% (97) were still actively seeking work and 14% (33%) had dropped out of the labor market. Of the remaining 109 persons, it was determined that they had not found work, but no further information was available on whether they were actively seeking work.

Compared to the total project sample, those who found work were more likely to be minority group members who thought positively about career change. Those clients who had not found work but were still actively looking showed much more marked resistance to change in job objectives or career focus. Individuals who had altogether left the labor market were primarily minorities (70%), female (82%), and somewhat more likely to be aged 60 or over. Although they were on the whole better educated than the job-seekers or successfully employed clients, this was less compelling than the fact that 81% saw themselves as retired. They demonstrated some degree of readiness to consider career or job alternatives, but fell far short of the flexibility shown by the successfully employed group.

Was project intervention responsible for the success of some individuals in obtaining employment? Did it increase the likelihood that older persons would remain active job-seekers even if they did not find work within 30 days after their training sessions ended? The answers are encouraging, although there are some mixed results.

First, the successful job seekers were more likely to have used PLATO; only 4.4% did not, compared to 6.2% of those still seeking work and 9.1% of persons out of the labor market. Second, successful job seekers were more likely to have used 5 or more lessons on the system -- 24.3% compared to 20.6% actively seeking and 18.3% out of the labor market.

A small quasi-experiment was implemented at the Waxter Center, in which 33 persons received classroom training without CAI and 32 with CAI. There was no significant subsequent difference in the job-seeking success of the two groups. Approximately 25% in each group found work. However, these results are more impressive when considered in light of the fact that if the PLATO group were examined closely, it could be noted that these clients had a median age exceeding retirement, were more likely to have seen themselves as out of the labor market before training began, and shared with the non-PLATO group other characteristics of disadvantagement -- notably minority status and long-term unemployment. By most measures, the PLATO group would have been more difficult to place in the labor market relative to the non-PLATO group. Thus, based on this limited evidence, one possible interpretation of the data was that the project helped to increase the supply of labor from persons who had previously withdrawn from the labor force -- a group which has been notoriously difficult to reach in employment programs for the elderly In short, the PLATO group at Waxter Senior Center suffered from more obstacles to labor marekt re-entry than did the non-PLATO group, but the PLATO group achieved nearly the same rate of employment as those who were somewhat younger and more labor-market oriented.

Stronger indicators of the relationship between use of computer-assisted instruction and job-seeking success are found when data were analyzed controlling for race, sex, education, and age at the three research sites. In general, there was no association between time on PLATO and job-seeking success for whites. Among minorites in the ABLE Job Club and the ABLE Older Worker Institute Clerical Program, however, those who used PLATO more also were more successful in finding employment. The most educated clients who found jobs also used PLATO more than jobless well-educated individuals. Results were consistent for all programs in the project. Unfortunately, numbers were too small to permit meaningful analysis for those with 12 or fewer years or schooling. Examined from a slightly different perspective, if all those actively seeking work are combined with persons who found employment, and clients are excluded who dropped out of the labor market, one finds that about 22% of all clients spent more than 90 minutes on PLATO irrespective of educational level. There was an appeal across the spectrum. A tendency can be noted, however, for those with college experience to work at least 30-90 minutes, while those with less education tended to spend the least time.

The most intriguing results occurred in the analysis of data, controlling for sex. Women who spent more time on PLATO were most likely to find jobs when compared to those women who did not use the system as much. These findings were consistent across all programs in the project. Overall, men were more able to find work than women, but no relationship was found between job-seeking success and median time on PLATO.

In summary, project results suggest a potentially significant role for CAI in addressing the needs of those older persons who are most disadvantaged in the labor market. There is a justifiable basis for continuing to explore the role of CAI in employability development programs. Computer-assisted instruction may prove to be more effective than other methods for attracting and retaining program participation of individual who are partially or fully retired. There is similar promise for reaching minority elderly, particularly women.

Research findings support the assumption with which the project was originally undertaken -- that older people would enthusiastically respond to opportunities for computer use, would find keyboard and screens easy to use, and would perceive the experience as useful in relation to job-seeking goals. Many adaptations in software content were, however, necessary in order to enhance specific appeal and relevance to job search problems of the elderly. While adaptation of existing software increased its suitability for the older worker population, it was felt at the conclusion of the project that development of new applications should have higher priority. Programming languages recently invented to support "expert systems" and other artificial intelligence research should be brought to bear on the design of CAI which is more appropriate for older workers. This would permit creation of software that responded to experience and individual differences in perspectives. "Drill and practice" is not an effective method for teaching skills or knowledge to the older adult, although almost all software developed over the past 15 years in CAI uses this approach.

There were several unexpected findings in the study. First, follow-up analysis revealed a small number of older clients (age 60 or over) enrolled in employability skills training even though they did not expect to seek work at all. Interviews suggested that some of these persons who were minority elderly saw the transmission of job-seeking skills as an inter-generational responsibility -- part of their role as grandparents or in work with youth groups at church. This is an intriguing perspective of how unemployment issues might be tackled as part of other strategies for reducing minority youth unemployment.

Second, the project attracted few minority males or white females. It is not understood why participation of these groups was so low. A fuller examination of the settings in which the project was conducted does not provide a satisfactory explanation.

The powerful association between race and many other project findings was much more pervasive than expected, ranging from patterns of lesson usage and likelihood of intensive systems use to relative success in job-finding efforts. The benefits of the project for disadvantaged elderly blacks, in particular, seem surprisingly great. Computers are a tool for empowerment. Not only does the project show that virtually all elderly respond positively to this experience, but the group which stereotypically would be least perceived as having motivation to use this tool is in fact the most strongly motivated. In general, the picture which formed of project participants was one in which vigorous, flexible older minorities at or past retirement brought considerable strength to their job search effort. They exploited PLATO. They exploited the job market. They exploited their classroom experiences. By contrast, interviews and observation suggested that many of the younger male whites, 50-59, had reasonable credentials on paper but were in fact undergoing a variety of personal problems from alcoholism to depression. No data was collected on the mental health status of project participatns, but the impression is that whites tended to be psychologically less robust than their older minority colleagues.

In terms of dissemination activity on the project, there were seven main outcomes. Private foundations were contacted and asked to help fund continuations of the project. To date, Mott Foundation and Busch Foundation have approved grants to the Minneapolis Senior Federation. A representation of the Mott Foundation has expressed interest in having a project presentation at an annual conference on Technology and the Aging in September. Project software is currently running on the University of Illinois and University of Maryland PLATO systems. Any expansion of either of these networks will automatically extend the availability of these programs. The University of Illinois PLATO network is planning growth to 4,000 users nationwide within the next 12 months and a significant drop in costs. A two-volume program manual and an accompanying one-volume staff computer manual were drafted for use by the Minneapolis Senior Federation and can be distributed for costs of reproduction to provide a beginning basis for program replication. Control Data Corporation has expressed specific interest in this program, particularly in the potential for national dissemination of the PLATO Career Information System. Negotiations are continuing as part of CDC's planning and marketing cycle. Authoring systems do exist for translating project software to other major system, including the IBM PC and APPLE. Consequently, another means of achieving wide-scale dissemination is to work through small companies which will provide marketing results to major corporations such as McGraw Hill and IBM. Eleven public presentations were also made to multi-state and national audiences as part of this project.

The problem of stimulating private sector interest proved more intractable than anticipated but potentially hopeful at project close. National marketing and effective dissemination of project software packages will require commitment by a major firm such as APPLE, IBM, or Control Data Corporation. The complexity of these firms and their internal decision-making processes means that a longer timeframe is required than this project allowed, if the objective is to ask a major corporation to adopt a new direction in its marketing and production strategies.

In terms of implications for theory and practice, experience in the project makes clear that a source of considerable resistance to CAI lies not with the client but with the practitioner. While administrative and research applications of computers are gaining greater acceptance, the social service professionals and staff in the voluntary network remain deeply conservative about what constitutes an effective technique for delivery of service. Traditional interpersonal relationship-building techniqures are defended to the exclusion of the potential of other mechanisms such as the computer for communication and transmission of ideas. At the other extreme, CAI classes in which the client is left largely to fend for himself/herself are not likely to be effective. The project has shown that strong professional leadership in the context of clear expectations and a well-defined curriculum comprises the basic groundwork upon which CAI applications must be built. Use of the computer is not an end in itself.

I. INTRODUCTION

A. Description of Problem

Older workers are, on the average, less competitive than younger persons in the labor market. Moreover, when the aging job-seeker does find work, it is typically at a lower wage or salary level than in previous employment. While older persons are the most vulnerable to the effects of recession -- because they often work in technologically obsolescent industries, they are least likely to be reemployed during periods of recovery. Older individuals also suffer longer periods of unemployment between jobs than do their younger counterparts. Even after retirement, some individuals are driven by economic necessity back into the labor market, where their job hunt is troubled by the presence of declining physical mobility, health problems, and often an ill dependent spouse at home.

Considerable analysis of labor market participation by older workers and the factors which are likely to effect job-seeking success or job retention has been carried out on the basis of national longitudinal studies. However, much less is understood about methods of intervention which increase the ability of older persons to find work despite structural barriers of race, limited education, employer prejudice, unfavorable market conditions, or other factors. The "Job Club" concept, first developed by Nathan Azarin and subsequently adapted for older workers by OPERATION ABLE in Chicago, represented one of the first research-based successful models for assisting older persons in finding work.

Despite this and other promising developments in program concept which emphasized the systematic training of persons in "employability skills," traditional methods of instruction and guidance have been used virtually everywhere. These methods include mini-lectures, films, group discussions, role-playing, reading assignments, visits from business or labor representatives, and to a much lesser extent, self-paced exercises. The typical training group has been small (4-8 persons) and at its best, highly interactive. Modern electronic technology has been introduced as a support principally through use of videotapes and, in the case of Job Clubs, banks of telephones for job inquiries by clients.

Even though the gains have been made in targetting content to older person's needs and new perspectives on how to achieve gains in skills of job-seeking which lead to employment, there has been a conspicuous absence in use of one of the most powerful instructional supports developed in this century: The computer. While computer-assisted guidance and instructional systems have been extensively introduced at the primary, secondary, and post-secondary public school level over the past two decades, extensively purchased by the United States military, and increasingly adopted by private industry for worker retraining, there are no applications of computer-assisted guidance or instruction in the public or private sector which have been expressly developed or adapted for the older person. While this may be somewhat less important for scientifically specialized content areas, many software applications may have little value for the older adult if the exercises, content, or references are too explicitly geared to younger individuals. "Employability skills" lessons are a conspicuous example of an area where age and experience introduce significant differences in the learning objectives and job-seeking strategies which ought to be offered.

If computer-assisted instruction and guidance would improve the productivity of current job skills training programs by reducing the labor-intensiveness required and if more rapid skill development and learning gains could be achieved, then the use of computers in employability skills development programs for older persons would be more than justified. Even if these benefits were not immediately obtained because of needs for continuing improvement in software, the testing of computer-assisted instruction in these settings would be justified on grounds of equity alone. The distribution of new technology for purposes of education has, to this date, been a lop-sided one: younger persons have been almost the sole beneficiaries. Research is needed which confirms that older persons are as likely to respond to computer-assisted instruction as any other group.

B. Literature Review and Assessment

As was already observed, computer-assisted guidance and instructional systems have been extensively introduced at the primary, secondary, and post-secondary public school level over the past two decades. The first literature on "teaching machines" actually appeared in the 1920's, but did not achieve any magnitude until B. F. Skinner published on the subject in 1954. The conditions under which programmed instruction can be used with minimal intervention from a counselor or instruction have been a subject of theoretical and research interest since that time.

The use of computers in teaching adults has had considerable intuitive appeal. Individual student differences -- which become particularly pronounced as people age -- might be managed more efficiently as each person worked independently. Those who may have failed in a traditional classroom setting or who were experiencing considerable anxiety after many years away from a formal learning situation may benefit greatly from the "non-judgemental" interaction of a computer. (See, for example, Siegal, 1978). It has been theorized for more than 25 years that skills of teachers and human service professionals could be more effectively utilized if certain routinized tasks were carried out by computer (Fletcher G. Watson, 1963).

Early predictions of the impact of CAI were based on pilot studies with no control groups, and expansive expectations emerged. For example, W.A. Vandermeer argued in 1960 that CAI would be equal to or superior to conventional teaching methods on all tests. Subsequent research has not supported this position. In fact, traditional methods have been proven superior in some cases. At this stage, more than 20 years later, the results of CAI research have still not been definitely understood.

Learning gains. Recent surveys of the effectiveness of computer-assisted instruction in elementary and secondary schools (the locus of nearly all experimental studies on CAI) indicate that students achieve as well or better using CAI, when compared to the achievement of students in traditional classroom setting (Hallworth and Brebner, 1980). Magidson (1978) has reported that CAI is as good as traditional classroom instruction in 55% of all studies and more effective in 45%. Perhaps even more notably, Thomas (1979) found that in those institutions which used CAI as a supplement to the traditional classroom process, greater learning gains were attained than with the traditional classroom alone, regardless of teaching strategy, computer systems involved, testing methods, or level of education. Similarly, when S. Tsai and N. F. Pohl compared the effectives of CAI and traditional instruction used together and separately, significant differences were observed on final examinations (though there were no significant differences in performance on homework assignments or projects). Students using both types of instruction achieved higher scores at the conclusion of the course than did those who worked exclusively on the computer or received only traditional classroom instruction.

The findings are not consistent, however. One experimental study with children (R. Thorkildsen, 1981) found when teaching time was held constant, students receiving paper and pencil tasks performed better than students receiving the same instruction on computer. Stallings (1980) studied 87 secondary remedial classrooms, and reported that the greatest gains in reading skill were achieved when pupils interacted in group activities around a learning task, rather than through silent reading or written, self-paced assignments. She concluded that self-paced learning techniques were not beneficial for all students.

While many positive reports of learning gains on the PLATO system have been made (see, for example, D. L. Bitzer and D. Alpert, 1970; M. L. Flynn, L. V. DiBello, and L. Patchner, 1981; L. A. Meyer, J. C. Ory, and R. C. Hinckley, 1983; M. L. Flynn, 1977; M. L. Flynn and L. V. DiBello, 1982; See also E. R. Lyman, 1978 for a bibliography of 400 additional articles published since 1963), there is at least one study by Murphy and Appel (1977) which found no difference in academic achievement between those in the traditional classroom and those working on PLATO. Questions have also been raised in four recent studies as to whether learning gains from PLATO are retained in the long term, although these research results have been criticized on grounds of methodologically unsound pre-test and post-test procedures. (G. W. Pinney, 1982)

Of particular importance to the project is the finding by A. Mathis, T. Smith, and D. Hansen (1970) that CAI was especially helpful to students reviewing work with which they had prior familiarity. Software which offers numerous branching options seems to be more helpful than non-branching versions, according to J. E. Coulson et al (1970). This is meaningful for the project, because the software which will be used has extensive branching.

Learning Efficiency

Students learn more rapidly using CAI in the same amount of time than in traditional classroom settings. L. Lewellen (1971) and J. R. Allen (1972) both report, for example, that time savings of up to 40% can be achieved. D. Bitzer and D. Alpert (1970) stated that students in a medical science program were able to complete a semester's work in 33%-50% less time than required by students in the regular classroom.

Response of Users to Computer-Assisted Instruction

Studies of CAI seem to be uniformly consistent in reporting positive attitudes by users. A. Mathis, T. Smith, and J. Hansen found generally high satisfaction among college students (1970), although satisfaction was lowest among those who had made several mistakes. Attitudes also seemed to be more positive when the instructional content contained some familiar elements. Software design which provides the student with help, gives prompting to guide toward correct answers, and which builds on some existing knowledge (is thoughtfully assigned) is therefore likely to generate the greater user satisfaction. In relation to the project, PLATO software contains HELP features, has been sequentially structured, and never leaves a user without a means of answering online questions. It is not known whether special HELP features may be needed for an older user population.

Computer-assisted instruction seems to generate more positive attitudes toward technology. Saracho (1982) reported that students receiving computer-assisted instruction not only achieved more, but had better attitudes towards computers than those in the traditional classroom. Mathis, Smith, and Hansen (1970) achieved similar results. Even when mechanical problems affected system operation, one group of college students still reported favorable attitudes toward the hardware, in another study by E. M. Magidson (1978).

Impact of System Features

It is not clear to what extent the computer technology employed influences negative research results. Rapid response time can stimulate interest (F.M. Grimm, 1978), while response and downtime can negatively impact interest. System response time and downtime can negatively affect user attitudes and motivation, particularly where there is great variability in response time (J. R. Carbonnell, J. I. Elkind, and R. S. Nickerson, 1968; H. A. Wagner, et al, 1978). The rate of display and screen display size (e.g. 12 lines, 24 lines, or unlimited hardcopy) also affects learning performance (V. E. Dennis, 1978). The importance of graphics has been reported by Wells et al (1973) and synchronization of offline media devices with online content (G. P. Kearsley and M. J. Hillelsohn, 1982). The PLATO system, which was employed in this project, has extremely rapid key-response times of less than 1/8 of a second or less. The system is generally scheduled to be available 23 hours a day, and system reliability is very high--more than 95% of scheduled time has been available to users. Text is written on the screen at a speed of 180 characters per second.

Effect of Demographic and Socioeconomic Characteristics on User Response to CAI

Very few studies have addressed the interaction of demographic or socio-economic variables with outcomes of CAI.

Users with disadvantaged or educationally deficient backgrounds have been studied to a limited extent. Osin (1980) found highly significant learning gains for disadvantaged Israeli students using CAI. Bunderson (1972) observed that students with poor achievement histories are more likely to attain learning objectives on CAI than in a traditional classroom setting, although it was also noted that average or above-average students are likely to work more rapidly on CAI than low performers. Tait, Hatley and Anderson (1974) also noted the largest pretest/posttest gains among students who started their CAI with the greatest relative deficit. At least one earlier study has suggested that disadvantaged users would be least likely to benefit from computer-assisted guidance, (J. M. Elridge and J. M. Smith, 1972), but Flynn and DiBello's findings show no difference by income class. In fact, Siegel and DiBello found in their two-year research project at the Clearfield, Utah Job Corps Center that among the learning disabled and highly disadvantaged students at the Center, the 218 youth who used PLATO for GED preparation were highly satisfied, thought that computers can teach, and 68% preferred instruction on PLATO to the traditional classroom. One of the unexpected results of this project was a high level of evening and weekend PLATO usage. Corps members used PLATO rather than attending movies, sitting in the dormitories, or participating in sports activities. The software they used were educational lessons in game format, self-selected basic skills and GED materials, and advanced lessons in such areas as automotive maintenance, electricity, and computer science.

Application of Programmed Learning and Automated Instruction to Teaching of Older Workers

H. L. Sheppard (1978) has summarized the status of studies on training methods for older workers:

> There is little in the evaluation research literature concerning the training experience of older workers under MDTA and related programs that focuses on the effects of differences in methods of training such workers. Rates of completion, of placement, of earnings, and work continuity (by skill-content of course, etc.), may be found in the research data, and reporting sources. But rarely is there any information about the way in which trainees are taught, or learn. (p. 187).

However, there is some evidence accumulating which supports the potential for self-paced, programming learning approaches as particularly effective for older learners. J. G. Neale, M. H. Tabin and E. Belbin compared achievements of older workers using programmed learning with a control group in a traditional classroom. They reported that younger workers performed best in short sessions, while older workers did better in medium-length sessions. They concluded that older workers must first be given some time to accustom themselves to a new learning strategy. The authors argued that, "older people do not learn better or worse; rather they learn best under different conditions."

E. Belbin and M. Belvin (1971) have worked extensively on the problem of how older adults can be taught best. Based on several studies in London, they maintain that older people can be expected to move into new training situations with more anxiety about failure than younger workers. They emphasize that the older worker must learn through building on past knowledge or experience. Rapid feedback in the training system is crucial, and non-verbal teaching strategies work better than verbal methods.

In one of the few research reports with an experimental design which compares the gain of younger and older populations from automated instruction (Meyer, Ory, and Hinckley, 1983), no differences in age were observed on reading and mathematics content, but a significant differences ($p<.01$) was noted on language scores. Younger adults, both black and white, were more successful than older adults and hispanics. Tables in the report do not show how age intervals were established for analysis, but the age range was 18-74. No females were included in the sample of 359.

Flynn and DiBello have been collecting data since 1980 which permit comparison of young and older PLATO users. The value of these research reports in relation to this project is that the population samples were drawn from vocationally oriented programs in Chicago community colleges (M. L. Flynn, L. V. DiBello, and M. Knight, 1982), Job Clubs in a local CETA prime sponsor (M. Knight, L. V. DiBello, and M. L. Flynn, 1982); (M. L. Flynn and L. V. DiBello, 1982) and the job training component of a CETA prime sponsor program (M. L. Flynn, L. V. DiBello, and L. A. Patchner, 1981; L. A. Patchner and M. L. Flynn, 1980). Flynn and DiBello's research results, based on small sample sizes of 25 or fewer for age 35 and over in each study suggested several hypotheses for further investigation. First, older workers seemed to display more initial anxiety over keyboard use than did younger PLATO users, and tended to report somewhat more difficulties in ease of reading screen displays. However, none of these differences was statistically significant. At all ages, women were less likely to have problems with terminal usage than men. Perhaps even more significantly, few persons reported any problems (only 17% of 751 clients interviewed.) The most consistent findings were overall satisfaction rates exceeding 80% and the absence of any socio-economic characteristics which were negatively correlated with the effectiveness of CAI.

Impacts of Automated Career Information Systems

User satisfaction with an automated career information system seems to have been consistently high (Reardon, 1982; Harris, 1974; Harris-Bowlsby, 1976; Linderman, 1972; McKinlay, 1971; McKinlay, 1975; Rayman et al, 1978). Clyde (1979) concluded that maximum benefit was derived from automated career information and guidance systems when they were used in conjunction with a counselor. This finding underscored the need for staff training in implementation strategies. Little research has been conducted on counselor perceptions or how their activities are affected by the introduction of a career information system.

Effects of the Oregon Career Information System showed that users were more certain of career plans and goals after using the system; had greater knowledge of occupational characteristics; and found the system helpful in finding reasons to eliminate occupations from consideration (McKinlay, 1971). Users of other systems also demonstrated increased knowledge of specific occupations and greater career awareness (Annartunian, 1973; Ryan, 1980).

Summary of Relevant Research Findings

The major findings in the evaluation research literature since 1960 relevant to this project are:

- With few exceptions, research on learning gains through automated instruction has been conducted in the public schools. Little is known about how CAI can impact clients in social service agencies or non-traditional settings.

- Computer-assisted instruction is theoretically a preferred training method for the older learner, because of its self-paced feature which maximizes allowance for individual differences.

- Computer-assisted instruction is likely to work best when used in conjunction with, rather than separate from, traditional teaching methods.

- Learning on an automated system can be achieved more rapidly than through traditional classroom teaching, although older workers will require some initial time to "learn how to learn" through this new approach.

- Older workers respond better to non-verbal rather than verbal teaching methods.

- Computer-assisted instruction is most effective when it is delivered on a system with high reliability, rapid response time, numerous HELP features, rapid feedback on performance, graphics, extensive branching in software design, and synchronization with offline materials or media devices.

- Few studies have examined the interaction of demographic or socio-economic variables with CAI outcomes, but disadvantaged and learning disabled populations seem to make significant gains.

- There is little evaluation research on methods of training older workers.

- Older CAI users seem to enjoy using computers, may have slightly more difficulty initially with keyboard use, are equivalent to younger people in benefit from automated basic skills instruction in reading and math, but may have difficulties with language (writing and grammar) lessons.

- Maximum benefit is derived from use of automated career information and guidance systems when used with counselor assistance.

- Use of automated career information systems generally increases user's knowledge of occupations.

C. Concepts and Assumptions Underlying Problem Investigated

Several underlying assumptions were important to the conduct of this project. First, it was assumed that in all communities where project innovations were implemented, the job supply was adequate if the job-seeker were willing to be sufficiently flexible and consider new alternatives in job objectives or careers. In the large metropolitan areas where project implementation took place, this assumption was probably reasonable despite persistent national unemployment averages exceeding seven percent.

Second, it was assumed that program objectives and content at ABLE and the two cooperating research sites would be structured, written down in large measure, and accessible. This assumption was critical, because the thrust of the project was to mesh computer-assisted instruction and guidance with other methods of program delivery already in place. The computer was intended to reinforce, not substitute for, teaching and counseling going on in other parts of an employability skills development program. It was also assumed that staff would respond positively to the introduction of computer assistance, because there did not seem to be enough time or manpower to meet the diverse, pressing needs of clients. These assumptions proved to be less viable under the test of experience, and created unanticipated difficulties.

Third, it was assumed that hardware could be installed and communications with the mainframe established in the average amount of time which experience at the University of Illinois had shown to be necessary. This was not the case. Divestiture of the Bell Telephone Company occurred during the project period, throwing rate structure, installation schedules, and control of decision-making into disarray. These problems complicated the start-up for cooperating research sites and caused delays of 2-4 weeks.

Fourth, it was assumed that both clients and professional staff using the computers would be interested in making on-line comments about the quality of the software they were using. The response from professionals was ultimately mixed; volunteer staff had considerable difficulty; and clients rarely made comments. From site observations, it appears that the paucity of client comments was principally due to lack of encouragement from staff -- either because typing was too troublesome and time-consuming or because staff did not themselves see this as a high priority.

Finally, it was assumed that older persons would respond to computer-assisted instruction exactly as research shows younger populations to have done -- with interest, enthusiasm, and perseverence. Data from all three sites seem to substantiate this initial belief.

D. Definition of Key Terms

The most important term used throughout this study is "computer-assisted instruction," or CAI. The term refers to any mode of teaching, counseling, or skill development in which computerized lessons are used in conjunction with traditional teaching methods to promote learning.

"Courseware" refers not just to those courses which have been computerized, but to textbooks or other print and audio-visual materials which form a total lesson package.

"Mainframe computer" means a large central processing system with capacity for storing and remembering vast amounts of information. Terminals are used to access the computing and memory of the mainframe. Because all the terminals are connected to the same central computer, a network is formed which permits electronic communications between users.

Electronic mail, computer conferencing, and on-line "talk" are forms of communication between users on the system. Electronic mail is stored in notesfiles which may be read by individuals privately or, under certain circumstances, by groups of individuals. Computer conferencing allows many different individuals to contribute ideas sequentially on the same topic. "On-line talk" allows individuals to write notes to each other on the bottom of their terminal screen while another display occupies the rest of the screen. These exchanges are much like telephone calls, although the communication is more limited because only one line at a time is shown at the bottom of the screen and the exchange of words is much slower.

Employability skills refers to that collection of behaviors, plans, and documents which permits the individual to target job-seeking activity quickly and effectively. Examples include resume writing, interview skills, selection of industry or occupational objectives, grooming, improving self-confidence, and other marketing techniques.

Job Club is a program which has many variations. The model originally demonstrated by the United States Department of Labor makes job-seeking a job in itself. Participants are given a limited amount of in-class instruction and then begin making telephone calls to employers using the new techniques they have learned. The focus is behavioral, with emphasis on practice, in the context of group support. Job Clubs were designed particularly to bring the disadvantaged, mentally ill, and other handicapped populations into the labor market.

E. Objectives of the Project

The overall goals of this project was to demonstrate how employment programs serving the older worker can use computer-assisted instruction and guidance to improve program outcomes. It was expected that results would also be applicable to other HHS populations such as the handicapped and disadvantaged youth.

Objectives of the project were (1) to increase the effectiveness of job search training and employment assessment programs through use of specially adapted computer-assisted instruction and guidance software; and (2) to stimulate industry and government interest in the dissemination of software which meets the special needs of older workers.

F. Project Auspices

The project was conducted under the auspices of OPERATION ABLE. The School of Social Work and the Computer-based Education Research Laboratory at the University of Illinois Urbana/Champaign were responsible for joint project planning, hardware implementation, project evaluation, report preparation, development of software and supporting specialized curriculum, and staff training. ABLE conducted daily project activities at the Chicago site, publicized project activities, worked with the University in seeking private sector support from Control Data Corporation, and with the University maintained general oversight of the other research sites at Baltimore and Minneapolis (see next section.)

BLANK PAGE

II. METHODOLOGY

A. Project Design

The research was exploratory and formative, with data collected during and after project intervention. Data were obtained from 701 project participants in three different communities and from a total of six programs. The primary objective in project design was to observe the impact of CAI in the widest possible range of program settings, community environments, and among older persons with contrasting work objectives and socio-economic characteristics.

Within this overall framework, a small quasi-experiment was also conducted. At one research site (Waxter Senior Center in Baltimore, Maryland), project participants were divided into three groups: one received employability skills training with no computer-assisted instruction; the second group received computer-assisted instruction for nearly 33% of time spent in class; and the third group met for 90-minute, one-time job oriented discussion periods in which the computer was used to demonstrate certain ideas. Follow-up data on job-finding success were obtained for the first two groups but not the third, due to budget and time constraints.

The School of Social Work at the University of Illinois Urbana/Champaign was responsible for project evaluation, report preparation, and site training.

Sample selection. Three organizations participated in the project: OPERATION ABLE, the lead developmental site, which operated for 19 months; Waxter Senior Center in Baltimore, Maryland, which held project-related programming for 12 weeks; and the Minneapolis Senior Federation in Minnesota, operating for 20 weeks. Several sites in addition to OPERATION ABLE were initially considered, including the state agency on aging in Lincoln, Nebraska, the AARP in Colorado Springs, the Operation Able in Little Rock, Arkansas, Options Over 40 in San Francisco, California, and the newly emerging Operation Able in Boston, Massachusetts. Site screening criteria were established by OPERATION ABLE and the University of Illinois on the basis of (1) expressed written statement of interest by a potential site; (2) evidence of ability by the potential site to work cooperatively with OPERATION ABLE: (3) absence of significant technical problems which would undesirably delay start-up or contribute unduly to project costs; (4) demonstrated ability to recruit clients for project participation; (5) site accessibility from Chicago and Champaign-Urbana; (6) evidence the clients would be served whom OPERATION ABLE is unlikely to reach -- e.g. rural residents or retired populations; (7) organizational auspice and structure distinctively different from that of OPERATION ABLE; and (8) evidence of community credibility and sound funding structure.

Using these criteria, the sites in Little Rock, San Francisco, and Boston were excluded because of where the programs were located in ABLE-like networks. The Minneapolis Senior Federation and Waxter Senior Center in Baltimore were subsequently chosen because they best met the remaining criteria.

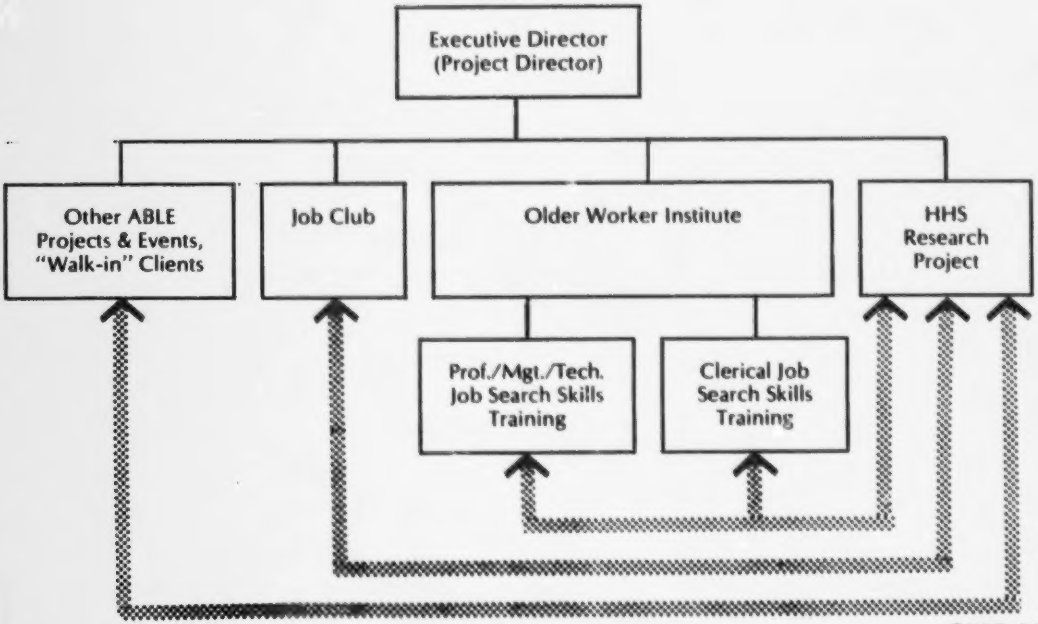
B. Implementation Model

OPERATION ABLE is located in downtown Chicago and operates as a not-for-profit, private organization which serves as a training, coordinating, and technical assistance hub for its network of more than 49 employment-related agencies. Among a number of programs under ABLE auspices, two were directly related to project activities -- the ABLE Job Club and ABLE's Older Worker Institute. The Job Club is supported by funds for the Jobs Training Partnership Act and serves severely disadvantaged older workers who are currently unemployed. The Older Worker Institute receives funding from a private foundation and client fees. It maintains a two-track program --one for older persons seeking work in clerical occupations, and a second track for individuals with professional, managerial, or technical skills. Many other older persons participating in other programs or events at ABLE also took advantage of the opportunity to explore or learn on the computer system, but follow-up data was not obtained on this group. In terms of administrative responsibility and relationship of the project to ABLE programs, one professional staff person accepted referrals to the CAI Center at ABLE. She attempted to set learning objectives for each client which were consistent with goals in the programs (e.g. Job Club) in which the individual was enrolled.

Diagrammatically, the relationship of the project to other elements of OPERATION ABLE may be shown as follows:

TABLE I

REFERAL FLOW OF CLIENTS TO PROJECT OPERATION ABLE


Executive Director
(Project Director)
Other ABLE Projects & Events, "Walk-in" Clients
Job Club
Older Worker Institute
HHS Research Project
Prof./Mgt./Tech. Job Search Skills Training
Clerical Job Search Skills Training

The Older Worker Institute training programs were structured to meet a total of 15 hours, 5 hours/day for 3 days over a one-week period. Average group size was 6-8 persons. Videotape, role-playing, overheads, lecture, and discussion techniques were used to teach new job search skills, in addition to approximately 1-2 hours of computer-assisted instruction during that period.

The Job Club initially met 2½ hours twice a week for one week in its "pre-job search" phase, then moved to a ½-day schedule daily in which participants were expected to conduct an active job search 4 hours per day. They either used telephones provided by the agency for making inquiries or attempted to hold 2-5 actual interviews per week. Average group size ranged from 8-15 during the project period. Videotape, role-playing, mini-lectures, group discussion and assignments were used to teach new job search skills. In addition, each Job Club member was assigned to approximately 2 hours of computer-assisted instruction during the project period. A small group of Job Club participants used the system much more--up to 44 hours. These were individuals with multiple personal and social problems which made it difficult for them to fit easily into the group of context of Job Club activities. They were more comfortable in the self-paced, individualized learning mode which the computer afforded.

The planned pattern for computer-assisted instruction was different for the Clerical Job Search Skills Training Group and the Professional/Managerial/Technical Group. For clients in the clerical program, the following pattern was adopted. Either immediately after the initial OWI Clerical Training Program orientation or on the first full-day session, clients individually used the PLATO Career Information System to formulate their job statements. They developed key words and phrases from on-line occupational description in CIS which related to job they had held or would like to hold. This was used to formulate a "job statement," which was subsequently reviewed with the OWI job counselor in classroom sessions. The clients also referred to this material when subsequently preparing for job interviews. On the second day of OWI training, these individuals used the computer-assisted lesson, "How to Fill Out a Job Application," followed by completion of two actual job application forms used by local companies. When time permitted, clients also completed the computer-assisted lesson, "How to Search for a Job." The clerical workers were also scheduled for computer use on their third day of OWI training. In total, it was expected that each person would receive approximately 2 hours/day for a 3-day training series. Additional sessions on the computer were also offered to those who chose to come in on their own time.

By contrast, the Professional/Managerial program clients were given the Career Information System and the Illinois Business and Industry Profiles (automated guidance systems.) Their time on the system was limited to approximately 15-20 minutes, although they also had the option of coming in for additional sessions and actually averaged more than an hour.

Another plan was made for Job Club clients. The computer lesson, "How to Search for a Job" was used with each client, who was asked to prepare a list of special personal characteristics which seemed to be most valuable in their own job searches. These lists were brought back to the Job Club instructor. Clients also completed the job application lesson, reinforcing discussion content in the classroom. There were, however, limitations on the amount of time which Job Club clients had available. Each group ranged from 8-15 in size and met twice a week, for one week. To save carfare ($1.00 each way), computer-assisted instruction sessions were scheduled before or after classroom sessions. A maximum of 6 clients were scheduled for the computer center at any one time, using all 3 terminals, for a two-hour period. Three clients thus gained hands-on experience; three observed. After 1 hour, the pairs were rotated. This group approach seemed acceptable because of the potential for reinforcing systems of mutual support and peer teaching, despite the potential negative effects on individual self-pacing.

The second research site was the Waxter Senior Center, which began project activities on June 15, 1985 and concluded with the last stages of client follow-up on September 30, 1985. The Waxter Center is perhaps the oldest comprehensive services center for older people in the country and is publicly funded by the City of Baltimore. This site differed in administrative style from ABLE in that only one staff member was responsible for all aspects of job search training, including the computer component. All training, whether classroom or computer-assisted, was conducted in the same room. The curriculum was one organized for this project although based on Waxter's several previous years of experience in CETA-related projects. Staff at the Waxter's site had prior experience with computer-assisted instruction and the mainframe system used in this project, which facilitated rapid start-up. The client population at Waxter was, unlike that of ABLE, predominantly black, educationally disadvantaged, and over age sixty. Many regarded themselves as retired and were more typical of older persons found in senior centers across the country.

Project start-up at Waxter Center began on June 15, with 4 weeks of classroom training without computer support and 6 weeks of classroom training with computer support. Under both treatments, classes were scheduled for Monday-Thursday, with one group meeting from 9:30 a.m. - 12:00 noon and a second group from 1:00 - 3:30 p.m. Both groups met concurrently on Friday mornings. Friday afternoons were reserved for follow-up, and curriculum development. One full-time instructor provided all the training, with 18 clients served during each two-week training session. In the classroom sessions, both with and without computer support, the curriculum included methods for building positive self-esteem, identification of individual strengths and skills, labor market information, analysis of the hidden job market, methods for completing job applications, techniques for managing job interviews, and how to develop references. Videotapes and role-playing were used in addition to computer support.

Project programming at the Waxter Senior Center can be shown diagrammatically as follows:

TABLE 2

SCHEDULING, RESEARCH INTERVENTIONS, AND NUMBER OF CLIENTS IN PROJECT AT WAXTER SENIOR CENTER

Week Number	Morning Group	Afternoon Group	Type of Training
1 and 2	9 persons	9 persons	Classroom training WITHOUT computer support (n=36)
3 and 4	9 persons	9 persons	
5 and 6	9 persons	9 persons	Classroom training WITH computer support (n=36)
7 and 8	9 persons	9 persons	
9 and 10	7 sessions of approximately 10 persons each session		90 min. small group discussions WITH computer support (n=75)
11 and 12			Follow-up

Third site was the Senior Federation of Minneapolis, Minnesota, a grassroots organization with 40,000 older members who support the Federation with their contributions. The Federation also receives significant assistance from private foundations, but unlike OPERATION ABLE, it has never accepted any state or federal funds up to this time. The primary mission of the Federation has been advocacy, particularly in the area of health care, but the organization hoped to use this project as a means of addressing new areas of need. The project represented their first direct service training project, but they were initially confident about attracting a large pool of clients from their membership and extensive network of contacts throughout metropolitan Minneapolis. This belief seemed

TABLE 3

SUMMARY OF SITE CHARACTERISTICS: OPERATION ABLE, WAXTER SENIOR CENTER, AND MINNEAPOLIS SENIOR FEDERATION

	OPERATION ABLE	WAXTER SENIOR CENTER	MINNEAPOLIS SENIOR FEDERATION
No. of terminals	3	2	2
No. of clients served by project	516	150	35
Org. auspices	Private, voluntary, professional	Public (Municipal)	Private, Voluntary
Major funding source	Mixed public and private corporate	Taxes	Membership fees, private corporation
Project client characteristics	Professional, managerial; clerical; severely disadvantaged	Retirees, predominantly black, lesser education	Professional and technical
Program leadership	Professional	Professional	Voluntary, professional supervision
Program structure	4 "feeder" programs plus "walk-ins" to computer center	1 staff person responsible classroom and computer	4-6 volunteers responsible for classroom and computer
Curriculum	Low classroom/computer integration	Moderate classroom/computer integration	High classroom and computer integration
Average class size	12	8	4

18.

TABLE 3 (Continued)
SUMMARY OF SITE CHARACTERISTICS
OPERATION ABLE, WAXTER SENIOR CENTER, AND MINNEAPOLIS SENIOR FEDERATION

	OPERATION ABLE	WAXTER SENIOR CENTER	MINNEAPOLIS SENIOR FEDERATION
No. of participants in project	largest (75%)	Middle-range (21%)	Smallest (4%)
Use of PLATO (hours)	lowest (av. = 1.3 hrs)	highest (av. = 6 hrs)	middle-range (av. = 2.0 hrs)
Use of Professional staff	high	high (plus volunteers)	minimal (volunteer leaders)
% of clients using CAI	100%	75%	66%
Racial mix of project participants	50/50 minority and white	predominantly Black (80%)	100% white
Age mix	71% under 60	71% over 60	60% under 60
Sex ratio	60% female	65% female	60% female

justified, because this Federation is the largest and longest established in the country. A unique feature of the site is that project responsibility was carried by a core of six volunteers, who were supervised by one professional Federation staff member. The volunteers were trained by University of Illinois staff, and a draft of a training manual was prepared for their use. Neither the volunteers nor the staff person had prior experience with computer-assisted instruction. It was originally hoped that the population served at the Federation site would include some older Indians (there is a large resident group in Minneapolis) and possibly rural elderly. However, socio-economic characteristics of the clients actually served the clients utlimately resembled closely the Professional/Managerial/Technical group in ABLE's Older Worker Institute.

The original project plan called for service to a total of 800 persons age 50 or over, with 500 at OPERATION ABLE, 150 in the Waxter Senior Center, and 150 at Minneapolis Senior Federation. However, the Senior Federation was only able to reach 35 persons and the aggregate number of clients involved in project activities at the three sites was 701.

Clients at the Waxter Center received a total of 18 instructional hours, of which 40% was to have been computer-assisted instruction. Due to problems in implementation, however, the actual average was less than 15%. Small groups of 4-6 persons met on Mondays, Wednesdays, and Fridays, for two consecutive weeks. Individual follow-up was planned as needed. During any single day session, the group was divided in half, with 3 persons meeting in a classroom setting and 3 persons meeting concurrently in the computer room, where they worked in pairs on the terminals or alternately on paper and pencil exercises. Six separate topics were outlined in a training manual written expressly for this site by the University of Illinois, with one topic for each 2½ hour session. The schedule for a group of 6 persons was this: 3 persons/80 minutes in class, with 3 persons/80 minutes on computer or paper and pencil exercises; 20 minute break; then the group rotated -- the classroom group going to the computer, and the computer group going to the classroom. Thus every client was exposed to the same content through three different delivery modes before the 2½ hour session was complete -- by computer, independent paper and pencil exercises, and classroom discussion.

The six general topic areas, one covered at each session, were: (1) self-assessment and exploration of occupational alternatives; (2) job targetting; (3) resume-writing and cover letters; (4) the open and hidden job markets; (5) effective interview techniques; and (6) job retention.

C. Methods of Data Collection

Data on responses to computer-assisted instruction and effects on job search outcomes were collected from several sources:

(1) A demographic and work history assessment form was completed at intake by program participants in the ABLE Job Club program, the Older Worker Institute Clerical and Professional/Managerial/Technical Training programs, the 72 persons at Waxter Senior Center who completed classroom and CAI 2-week training sessions; and all clients at the Minneapolis Senior Federation. (See Appendix I: "Initial Client Assessment Form.") Walk-in clients and others referred to the computer center at ABLE outside the Job Club or the Older Worker Institute were also asked to provide this information. The 78 clients at Waxter Senior Center who met for focused 90-minute group discussions on labor market opportunities were not surveyed for any information because their exposure to the computer was so consistently limited.

(2) A follow-up telephone interview form, designed to explore how clients had searched for work and whether they had obtained employment, was used with a sample of 31 Older Worker Institute clients, the 72 clients from Waxter Center who received classroom and computer-assisted instruction, and 10 of the Minnesota Senior Federation clients. Budget constraints prevented detailed follow-up with all clients. (See Appendix I: "Client Follow-up Interview Form.") However, all Job Club and Older Worker Institute clients were reached by telephone for a minimal interview to determine whether their job search had resulted in employment, whether the client still perceived himself/herself in the labor market, and whether work -- if obtained -- was subsidized or unsubsidized. Complete information even at this minimal level was sometimes difficult to obtain.

(3) A daily written off-line log near each of three terminals at OPERATION ABLE was maintained by computer center staff as each client completed work on a computer lesson. (See Appendix I: "Daily Log.") This information was intended to monitor lessons used on the system (over 10,000 hours of instructional software was potentially available); user satisfaction with each individual lesson, helpfulness of the lesson, and difficulties experienced in use of screen or keyset. Space was also provided for comments by staff which would reflect special issues or reactions. These data were coded by client name and combined with other information from intake and follow-up forms.

(4) On-line comments by clients and staff were the primary mechanism for obtaining feedback on needed changes in software design or other problems. The computer system used in the project has a feature which permits any user to write a comment several lines in length, if necessary, while looking at any screen display. This comment is "sent" to those responsible for designing lesson software -- that is, it is stored in an on-line file which programmers and others concerned with the lesson may examine. Often, on-line discussion would follow from an original

comment in the form of extended computer conferencing (described above). (See Appendix I for example of on-line user comments). More than 2000 comments were collected during the course of the project, with OPERATION ABLE the most active contributor. Other sites were not operational long enough for this practice to become familiar on institutionalized.

(5) On-line statistics were automatically collected for each user who looked at the Career Information System, the Illinois Business and Industry Profiles, employability skills lessons, and certain other basic skills or vocational lessons listed on the computer "menu" for this project. Data included time in each lesson and total time on system. Information was most detailed for the Career Information System, which had a specifically designed on-line log that tracked each user's responses to questions in the program and user time in each component of the lesson.

(7) Site observation was employed in all three organizations. University of Illinois staff visited each site at least twice to study program implementation and client response.

Data analysis. Data were analyzed using cross-tabulations, with computation of Chi-Square to test for significance in relationships. Findings at or below the .05 confidence level were accepted as statistically significant. The usual requirements for use of X^2 were met -- that is, no tests were conducted where expected frequencies were less than 1 or where individual cells contained fewer than 5 frequencies. Because the sample was large, there may have been a tendency toward findings of no statistical significance where, in fact, relationships existed. The purpose of this procedure was to determine whether samples from different programs and different sites were, in fact, generally alike, with some chance variations, or whether groups varied more than chance would predict. Because the data were discrete rather than continuous (except in the case of age and time on system), X^2 was the preferred statistical measure.

T-tests were computed in comparing mean times of computer use for successful and unsuccessful job-seekers.

D. Generalizability of Findings

Project findings should be generalizable to established programs which have well-structured structured employability skills training programs in urban areas. Results should apply to services for white and black populations, but not other ethnic minorities (due to the extremely small numbers of hispanics, Asian American, American Indians or others in the study.) Responses to CAI observed in this project will also be generalizable to computer systems other than PLATO, provided software and hardware have the same sophisticated characteristics. Systems with uneven response time, limited software graphics and branching, poor screen resolution, and limited technical support may not achieve the same results. Clients using software with no-age specific adaptations may be expected to show less satisfaction with the experience and lower usage.

Of the 701 clients served in this project, 430 were involved in a formal training program at one of the three research sites, and 389 were interviewed as part of post-training evaluation. Less than 10% could not be reached, and there is no evidence that this group differs significantly from those contacted. There is some probability that those not interviewed may have been employed, resulting in an under-statement of project impacts.

E. Significance of Target Population to AOA Programs

The target population of the project--retired job seekers looking for labor market reentry, economically disadvantaged older persons, and minorities, and dislocated professional/managerial workers--dovetails closely with service priorities established since 1965 by the Administration on Aging.

BLANK PAGE

III. PROJECT OUTCOMES

A. Research Findings

1. General Sample Characteristics

The project was implemented in three sites -- OPERATION ABLE, Chicago; Minneapolis Senior Federation, Minnesota; and Waxter Senior Center, Baltimore. At the OPERATION ABLE site, three separate programs referred clients to the computer, in addition to "walk-ins" and referrals from other sources. The three consistently-referring ABLE programs were the Job Club, serving economically disadvantaged unemployed older workers; the Older Worker Institute Clerical Job Search Training Program; and the Older Worker Institute Professional/Managerial/Technical Job Search Training Program. The largest proportion of clients served were located at the OPERATION ABLE program, with the Waxter Senior Center and Minneapolis Senior Federation operating demonstrations for only three months and 4½ months respectively. Table 4 shows the relative distribution of clients among sites and programs in the project.

Table 4

NUMBER AND PERCENTAGE OF CLIENTS SERVED BY
RESEARCH SITE AND PROGRAM,
October, 1984-January, 1986

RESEARCH SITE AND PROGRAM		NUMBER OF CLIENTS	% OF TOTAL
OPERATION ABLE		524	74%
Job Club	170		
Older Wkr. Institute	176		
Other referrals	178		
MINNEAPOLIS SENIOR FEDERATION		33	5
WAXTER SENIOR CENTER		150	21
Classroom	72		
Group discussion	78		
TOTAL		707	100%

Three-fifths of the project participants were female (424): 176 were male. Half the project participants were minority group members, as shown in Table 5.

Median age of these older unemployed workers was 57, with a range from 40 to 86. Only 12% were less than 50 years old.

Sixteen percent of the project participants failed to graduate from high school; 25% held a bachelor's or graduate degree.

Table 5

RACE OF PROJECT PARTICIPANTS AT OPERATION ABLE, WAXTER SENIOR FEDERATION, AND MINNEAPOLIS SENIOR FEDERATION

RACE	NUMBER	PERCENT
White	307	50.2
Black	275	44.9
Asian	14	2.3
Hispanic	11	1.8
Other	5	.8
TOTAL	619	100%

(missing data = 88)

On the whole, then, most persons were better educated than would normally be expected for this age cohort, particularly among the economically disadvantaged and minority women. Table 6 shows this distribution.

Eighty -four percent (594) of the clients did not see themselves as retired, but 113 did. This perception would normally be important in the client's motivation to seek work actively or learn new work-related skills. Only limited data were collected on previous unemployment history, but of the 84 persons asked, 44% had experienced two or more periods of joblessness in the past five years. Eighty-four percent (594) were not working at the time they participated in project programs. The remainder were either dissatisfied with their current employment, were underemployed, had been notified of pending lay-off, were only holding a temporary position, or were simply joining a project group as one way of learning more about the world.

Duration of current unemployment of project participants was an important factor. The majority could be considered long-term unemployed, as Table 7 shows.

Project participants were, on the whole, interested in full-time work (68.4%) or a possible combination of part-time and full-time employment (9%). Only 21% entered the training program with the objective of obtaining part-time jobs. It should be noted that 3 persons stated from the beginning that they were not job-seeking at all! They enrolled because they thought the information might be valuable to the youth groups in their churches or their own grandchildren.

Table 6

EDUCATIONAL ACHIEVEMENT OF PROJECT PARTICIPANTS AT OPERATION ABLE, WAXTER SENIOR CENTER, AND MINNEAPOLIS SENIOR FEDERATION

HIGHEST EDUCATIONAL LEVEL ACHIEVED	NUMBER	PERCENT
Some Grade School	14	2.3
Grade School Graduate	29	4.8
Some High School	55	9.1
High School Graduate	175	28.9
Some College	159	26.2
Associate Degree	19	3.1
Bachelor's Degree	107	17.7
Post-graduate Degree	48	8.0
TOTAL	606	100%

(missing data = 101)

Table 7

DURATION OF CURRENT UNEMPLOYMENT FOR PROJECT PARTICIPANTS AT OPERATION ABLE, WAXTER SENIOR CENTER, AND MINNEAPOLIS SENIOR FEDERATION

DURATION OF CURRENT UNEMPLOYMENT	NUMBER OF CLIENTS	%
Less than 1 month	2	.4
1 or 2 months	56	11.5
3 - 5 months	56	11.5
6 - 12 months	114	23.4
1 - 2 years	132	27.0
3 - 5 years	85	17.4
TOTAL	488	100%

(missing data = 219)

Around the vital question of whether they would be willing to consider a change in career or job focus, about half showed some ambivalence and 17% were not ready to do so, as shown in Table 8.

Table 8

INTEREST OF PROJECT PARTICIPANTS IN POSSIBLE CAREER OR JOB CHANGE: OPERATION ABLE, WAXTER SENIOR CENTER, AND MINNEAPOLIS SENIOR FEDERATION

WILLINGNESS TO CHANGE CAREER/JOB FOCUS	NUMBER OF CLIENTS	%
Yes, completely willing	162	34.4%
Perhaps	230	48.8
No, not willing	79	16.8
TOTAL	471	100%

(missing data = 236)

Follow-up information on job-seeking success was obtained on 53% of the project participants. Of the 375 clients interviewed 30 days after program completion, 136 (36.3%) were employed. For some of these individuals, it was possible to determine whether they were still actively seeking work, even if not employed, or whether they had withdrawn altogether from the labor market. Table 9 gives this distribution.

Table 9

LABOR MARKET STATUS OF PROJECT PARTICIPANTS AFTER TRAINING: OPERATION ABLE, WAXTER SENIOR CENTER, AND MINNEAPOLIS SENIOR FEDERATION

LABOR MARKET STATUS	NUMBER OF CLIENTS	%
Found employment	136	36.2%
No work - status in labor market unknown	109	29.0
Unemployed, but actively seeking work	97	25.8
Out of the labor market	33	8.8
TOTAL	375	100.0%

(Missing data = 325)

TABLE 10

COMPARISON OF CLIENT CHARACTERISTICS IN ABLE JOB CLUB, ABLE OLDER WORKER INSTITUTE, WAXTER SENIOR CENTER, AND MINNEAPOLIS SENIOR FEDERATION

			Able Older Worker Institute				
	WAXTER SENIOR CENTER	ABLE JOB CLUB	CLERICAL	PROFESSIONAL/ MANAGERIAL	MINNEAPOLIS SENIOR FEDERATION	TOTAL N	%
Enrolled	72	70	86	77	25	430	
% Minorities	86%	68%	49%	16%	0	231	54%
% Female	65%	68%	80%	23%	60%	264	61%
Median Age	63.5	56.5	57.6	57	56.2	--	--
% Less Than HS	30.5%	18%	18%	5%	8%	72	17.2%
See Self Re't.	54%	4%	13%	5%	28%	67	16.2%
% Unemployed 6 mo. or more	86%	92%	74%	51%	77%	280	81.6%
Want less than Full-time Job	81%	15%	31%	22%	57%	130	31.5%
Unwilling to Change Career	ND	15% 49%(perhaps)	20% 45%(perhaps)	23% 41%(perhaps)	ND	65	22%
% Found Job	27%	31%	40%	62%	14%	124	34%

Differences in Sample Characteristics between Programs. Perhaps more important than aggregate client outcomes were the experiences of clients within the context of individual programs at the three research sites. Table 10 summarizes some of the differences, emphasizing sources of disadvantagement or barriers to employment. The Table excludes other referrals or walk-ins at the OPERATION ABLE site in Chicago, because these persons were not enrolled as part of a structured group job search training experience.

Summary. Nearly three-quarters of project participants were served by OPERATION ABLE. Most were female, half were members of minority groups, 84% held a high school degree or beyond, and an equal proportion saw themselves as actively seeking work. Median age was 57. These olders persons were suffering from long-term unemployment (88%), were generally seeking full-time work (68%), but were uncertain about changing job or career focus. Follow-up information on approximately half the project participants indicated that 36% had found employment within 30 days of their job-search training experience.

2. Differential Characteristics and Patterns of Program Experience by Sex and Race of Clients

Sex of Clients. The sample was comprised largely of white males and non-white females. Women constituted 60.5% of the total sample and were represented proportionately at all ages from 40-70 and over. As might be expected, women were somewhat more heavily represented in the 70 and over group (65%). Men were significantly more likely to have one or more years of college education (X^2=31.33;2df; p=.001). Women were heavily concentrated among the high school graduates. On the whole, relatively few men or women held less than a high school degree.

Women had significantly less job experience than men (X^2=10.59; 2df; p=.005). One hundred percent of those with less than 15 years in the labor force were women. They were also much more likely to have been unemployed for a year or more prior to the training program. (X^2= 7.36; 2df; p=.02). Despite less education and fewer working years, women were no more likely than men to see themselves as retired (X^2=.57; 1 df; p=.44). Women were, however, less committed to full-time employment than men (X^2=15.69; df=3; p=.001.) Women were a little more flexible about their willingness to consider changing job objectives or career paths but not significantly. (X^2=2.6; 2df; p=.25). Men were more likely to be successful in finding work following training than women (X^2=6.35; 1df; p=.01).

In use of PLATO lessons, women more frequently used lessons on basic spelling, math, and grammer. They were significantly less likely to use the PLATO Career Information System (X^2=13.36; 1df; p=.0003.) or the Illinois Business and Industry Profiles (X^2=19.09; 1df; p=.00001). They were much more apt than men to use the lessons on how to search for a job and how to fill out a job application (p=.001), which were less sophisticated in some counselors' view than the Career Information System. Again, as might have been anticipated, women were significantly more likely to use the lessons on typing practice (p=.0001), while men were more concentrated in accounting lessons (p=.05.)

Race of Clients. The project involved few (13%) nonwhite males. Men were more likely to be white, and women nonwhite. There was a strong association between age and race of participants (X^2=12.23; 3df; p=.007). White participants were concentrated somewhat more heavily in the 50-59 age range, while minorities were most heavily represented in the over 60 group and among those under 50. As could be expected for this age cohort, minorities in the sample had significantly less education than whites (X^2=35.0; 2df; p=.00001).

In general, whites had less labor market experience than minorities in the program. Whites were less likely to see themselves as retired (p=.007), which makes sense when one recalls that most of the minorities had reached or exceeded conventional retirement age. Employment histories were greatly different for whites and minorities ($X^2 = 29.9$; 2df; $p = .00001$.) Nonwhites were much more likely to report periods of unemployment greater than 1 year. Whites and non-whites were equally interested in full-time employment (2/3rds of the total sample.) For whatever reasons, both groups were seeking a major labor force commitment.

Interestingly, whites were somewhat more apt to resist the idea of career change, or at least to view the possibility with ambivalence. Minorities were more willing to consider change. And despite the greater handicaps of advanced aged, longer periods of unemployment, and lesser education, nonwhites were equally or more likely than whites to have secured employment after concluding their training. This is contrary to the experience of many employment training programs in the past.

In their use of PLATO, a differential pattern emerged in assignment of lessons. Whites were significantly more likely to use the Career Information System for exploration of alternative occupations, while nonwhites were more apt to use lessons on how to search for a job and where to look for jobs. (See below, Table 9 and following discussion.) Minorities were disproportionately represented among those who received no PLATO training at all. It is not known whether this was a result of self selection, counselor selection, or other factors. Relatively few program participants examined vocational lessons on the system, but among those who did, minorities were significantly more likely to use the typing lessons ($p = .01$), while whites more often looked at accounting lessons ($p = .01$).

3. General Patterns of Computer Use and Client Response

Computer-assisted instruction at OPERATION ABLE and the Minneapolis Senior Federation was delivered on terminals connected to the University of Illinois PLATO mainframe computer. Waxter Senior Center operated on the University of Maryland-Baltimore PLATO system, with an additional terminal on the University of Illinois campus which was also linked to Baltimore on a dial-up basis for communications, site monitoring, and data transmission. Software from the University of Illinois system was transferred via tape to the University of Maryland-Baltimore system so that all three sites had access to the same core lesson content.

Median time spent on the system by clients was 87.6 minutes (approximately one hour and forty-minutes), with a range from 7 minutes to more than 45 hours. About 8% of all clients used the system for 7 or more hours -- that is, with high intensity. For the majority, however, this was not possible due to other classroom demands in the programs for which they were enrolled.

Lesson menus were created at the beginning of the project from which clients and their counselors might select lessons. Of the 10,000 hours of instructional software potentially available, an employability skills "core" was identified, together with supporting basic skills, behavioral skills, and vocational lessons. Table 11 lists the most frequently used lessons in rank order. The average time per lesson by each participant was about 40 minutes. Women and minorities were most likely to complete more than one lesson; men were more apt to do only 1 lesson or none at all.

It will be observed that none of the basic skills or vocational skills lessons (e.g. accounting or data processing) was used by clients to achieve mastery of an area. However, counselors did observe that if a client were allowed to explore in reading, math, or other areas which were potentially threatening, by successfully handling content presented on the computer the individual could gain more confidence about his/her ability to face similar content on the job. Alternatively, if the client discovered quickly that a significant deficiency existed, then the problem could be discussed in light of either changing job objectives or long-term educational options such as attending the local community college. The basic skills and vocational lessons were, then, primarily used by clients for self-diagnostic purposes -- to examine potential areas of interest, determine whether remediation might be needed, test out tentative job objectives, or to gain self-assurance.

Table 11

MOST-FREQUENTLY USED COMPUTER-BASED LESSONS BY NUMBER OF USERS AND MINUTES OF USE: OPERATION ABLE, WAXTER SENIOR CENTER, AND MINNEAPOLIS SENIOR FEDERATION

LESSON TIME	NUMBER OF USERS	%	AVERAGE MINUTES OF USE
PLATO Career Information System	275	44.3%	88 minutes
Where to Look for a Job	142	22.8	36
How to Search for a Job	132	21.3	48
How to Write a Resume	131	21.1	53
Typing Practice	120	19.3	43
How to Fill Out a Job Application	113	18.2	42
Illinois Business and Industry Profiles	87	14.0	32
How to Serve in Your Job	45	7.2	23
How to Read the Want Ads	41	6.6	36
How to Conduct a Job Interview	39	6.2	18
Memory Practice	30	4.8	15
Basic Spelling	24	3.9	30
Basic & GED Math	23	3.7	12
Data Processing	16	2.6	20
Accounting	16	2.6	15
Basic Reading	11	1.8	17
Basic Language	6	1.0	26
All other	33	5.3	65

BEST COPY AVAILABLE

Seventy-nine clients spent 7 or more hours on PLATO. This group showed several distinctive characteristics. They were most likely to be:

Non-white	(X^2=14.67; 1df; p=.0001)
Aged 60 - 69	(X^2=12.44; 3df; p=.006)
Have less than a high school degree	(X^2=28.07; 2df; p=.0001)
See themselves as retired	(X^2=28.77; 1df; p=.00001)
Unemployed for the past one or more years	(X^2=20.01; 2df; p=.00001)
Seeking part-time employment	(X^2=51.61; 3df; p=.00001)

This profile is highly important because it resembles clients frequently found in retirement or public housing programs throughout the country and the population to which Area Agencies on Aging have greatest access. It demonstrates that the older clients were not deterred by computer technology, but rather responded to this opportunity with more commitment than did relatively younger persons. Furthermore, this population is among the hardest to employ, because of interfacing barriers of old age, limited education, longer-term unemployment, and minority status. The fact that these individuals were able to reenter the labor market at a rate comparable to those somewhat younger and better educated is one of the most exciting results of the research. These findings are discussed in greater detail later in this section.

There was high consensus among clients on ease of use and helpfulness of the lessons which they tried. One of the important findings of the study is that clients responded positively to this experience irrespective of program, research site, or sociodemographic characteristics of the participants. Dissatisfaction, where it was present at all, was found among the professional/managerial/technical program participants in ABLE's Older Worker Institute. This group tended to feel that there was less software available which was appropriate for their needs -- but they also had less program time allotted for exploration and fewer opportunities to return to the machine after an initial orientation. Table 12 shows client responses to computer-based project materials.

More detailed analysis of user data reveals significant differences among clients in patterns of lesson usage. Table 13 shows a matrix of user characteristics and lessons used. Some of the findings can be interpreted in light of curriculum planning and clientele purposively targetted in certain lessons. Other results suggest a need for further research.

Table 12

CLIENT JUDGMENTS ABOUT EASE OF USE AND HELPFULNESS OF COMPUTER-BASED LESSONS: OPERATION ABLE, WAXTER SENIOR CENTER, AND MINNEAPOLIS SENIOR FEDERATION

LESSON NAME	SCREEN/KEYBOARD EASY TO USE	INSTRUCTIONS EASY	LESSON USEFUL
	% Responding Yes	% Responding Yes	% Responding Yes
PLATO Career Information System	86.9%	88.6%	98.2%
Where to Look for a Job	91.5	93.6	84.4
How to Search for a Job	92.9	88.6	94.4
How to Write a Resume	91.5	89.7	94.9
Typing Practice	81.0	87.0	95.1
How to Fill Out a Job Application	89.1	92.1	95.5
Illinois Business and Industry Profiles	80.7	94.3	82.1
How to Survive in your Job	100.0	1-0.0	85.7
How to Read the Want Ads	100.0	83.3	80.0
How to Conduct a Job Interview	100.0	100.0	85.7
Memory Practice	84.6	84.6	100.0
Basic Spelling	93.8	100.0	76.5
Basic % GED Math	85.7	83.3	88.9
Data Processing	85.7	85.7	85.7
Accounting	54.5	90.9	100.0
Basic Reading	100.0	100.0	100.0
Basic Language	66.7	66.7	100.0
All other	ND	ND	ND

Table 13

PATTERNS IN USE OF MOST FREQUENTLY STUDIED COMPUTER-BASED LESSONS: OPERATION ABLE: WAXTER SENIOR CENTER, AND MINNEAPOLIS SENIOR FEDERATION

USER CHARACTERISTIC	(1) RESUME	(2) TYPING	(3) LESSON EMPLOYER FILE	(4) HOW TO FILL OUT A JOB APPLICATION	(5) HOW TO USE THE WANT ADS	(6) CIS	(7) WHERE TO LOOK FOR A JOB	(8) HOW TO SEARCH FOR A JOB
Race		Non-whites X^2=5.70; 1df; p-.015	Whites X^2=8.64; 1df; p=.003	Non-whites X^2=13.73; 1df; p=.0002		Whites X^2=3.52; 1df; p=.006		Non-whites X^2=12.30; 1df p=.0005
Sex		Female X^2=57.49; 1df; p=.00001	Males X^2=19.10; 1df; p=.00001	Females X^2=10.92; 1df; p=.001		Males X^2=22.22; 1df; p=.00001		Females X^2=13.37; 1df; p=.0003
Age			50-59 X^2=7.78; 3df; p=.05		Over 60 X^2=7.58; 3df; p=.055			
Education				Less than HS X^2=16.84; 2df; p=.0002	HS or Less X^2=17.20; 2df; p-.0002		HS or Less X^2=18.85; 2df p=.0001	HS or Less X^2=8.71; 2df; p=.012
Re't.	Yes X^2=19.45; 1df; p=.0001				Yes X^2=22.40; 1df; p=.0001		Yes X^2=6.59; 1df; p=.01	
Current Spell of Unemployment				Over 1 year X^2=18.14; 2df; p=.0001				
Want Full-time Employment	Part-time X^2=18.63; 3df; p=.0003				Part-time X^2=20.72; 3df; p=.0001	Yes X^2=8.86; 1df p=.031		
Change Careers?						Yes X^2=5.82; 2df; p=.05		
Used CIS?	Yes X^2=4.31; 1df; p=.037	No X^2=19.68; 1df; p=.00001	Yes X^2=12.03; 1df; p=.0005		Yes X^2=9.11; 1df; p=.002		Yes X^2=4.22; 1df; p=.04	
Used How to Job Search?	Yes X^2=5.38; 1df; p=.02	Yes X^2=9.43; 1df; p=.002		Yes X^2=13.85; 1df; p=.0002	Yes X^2=26.07; 1df; p=.00001		Yes X^2=12.64; 1df p=.0004	
Used Where to Look For a Job?	Yes X^2=35.00; 1df; p=.00001			Yes X^2=37.17; 1df; p=.00001	Yes X^2=48.81; 1df; p=.00001	Yes X^2=4.22; 1df; p=.04	Yes X^2=15.75; 1df; p=.0001	Yes X^2=33.98, 1df; p=.00001
How to Use The Want Ads?	Yes X^2=78.80; 1df; p=.00001							Yes X^2=26.07; 1df; p=.00001
Employer File?						Yes X^2=12.03; df=1 p=.0005		
Used How to Fill out a Job Application	Yes X^2=18.44; 1df; p=.00001	Yes X^2=10.06; 1df; p=.002		Yes X^2=18.70; 1df; p=.00001	Yes X^2= 18.70;1df; p=.00001		Yes X^2=37.17; 1df; p=.00001	Yes X^2=13.85; 1df; p=.0002
Used Typing Practice				Yes X^2=10.06; 1df; p=.002		No X^2=19.68; 1df; p=.00001		Yes X^2=9.42; 1df; p=.002
Used Resume Lesson?				Yes X^2=18.44; 1df; p=.00001	Yes X^2 =74.80 p=.00001	Yes X^2=4,32; 1df; p=.04	Yes X^2=35.00; 1df; p=.00001	Yes X^2=5.38; 1df; p=.02

It should be noted that those who considered themselves retired are significantly more likely to use the lesson on "How to Write a Resume" than were those who perceived themselves as active labor force participants. Similarly, persons seeking part-time rather than full-time employment were also more likely to use the lesson. These findings are particularly important for several reasons. First, from a negative perspective, it meant that those who perhaps might most have benefitted from the opportunities for resume revisions which the computer-based lesson provided were least exposed to the software. However, professional, technical, and managerial job-seekers made little use of this program initially, because the employment counselor in the Older Worker Institute felt that the format was not well-suited to this relatively more sophisticated group. Extensive revisions were made in the lesson and a second "functional resume" track introduced, but these changes occurred relatively late in the project -- too late to affect usage patterns to any noticeable degree. While selected portions of the resume lesson could have been helpful even in the revised version, clients referred from the Older Worker Institute did not have more than a total of 1-2 hours, on the average, of time on the terminal released from their 3-day program. This would not have been sufficient for intensive on-line resume work.

A similar problem surfaced at the Minnesota Senior Federation, where a printer was not installed until late in the project. The major benefit of the on-line resume lesson has been the production of hard copy which the client can bring back to the classroom, or which can be altered as job objectives, industry targets, or other variables change for the client. The absence of a printer was consequently a non-trivial impediment to usage.

It is less clear why use of the lesson by economically disadvantaged clients seeking full-time employment was low. There was a tendency at OPERATION ABLE not to assign the resume lesson to referrals from the Job Club, because it was believed that most participants in this group were seeking work for which a fully developed resume would not necessarily be appropriate (other than a "pocket resume.") Second, the ABLE staff were most concerned that a functional rather than chronological version of the resume be produced -- and as explained above, the programming for this was not completed until the last half of the project.

The resume lesson was implemented most extensively at only one site -- the Waxter Senior Center, where the clients were older (median age = 63), semi-retired, predominantly female, black, and less well educated. This would partially help to explain the finding that those seeking part-time employment or who perceived themselves as retired were most likely to use this lesson. A related explanation might be that resume development was particularly important for persons who were attempting to move out of partial or full retirement, while those who had recently been on the job market would be more likely to have an updated personal history for employer review.

As Table 13 shows, another significant pattern is that females and minorities were most likely to use the lessons on Typing Practice, "How to Fill Out a Job Application, and "How to Search for a Job." By contrast, whites and males were most likely to work on the PLATO Career Information System (CIS) and the Illinois Business and Industry Profile (IBIP). To some extent, this reflects a difference in the pattern of lesson use recommended by University of Illinois, based on the purposes for which programs were originally written. "How to Fill Out a Job Application" and "How to Search for a Job" were originally designed and tested on a population of CETA participants who had lower reading levels and limited experience in successful job-seeking. On the other hand, the PLATO Career Information System and the Illinois Business and Industry Profiles were designed to deliver occupational and labor market information to high school and college level users -- although the system was widely used in the State of Illinois by local federations of labor and some administrative entities under the Jobs Training Partnership Act. (The PLATO Career Information System contains a 21-item interest inventory, which allows the user to generate a list of potential occupations for exploration from a regularly updated database on 90% of all Illinois occupations. This includes wage and salary information, required skills or education, typical job duties, and projected job demand. This information can be searched by local region and is entirely screen-based, requiring no supplementary explanatory print materials as is the case with other CIS systems in 17 states across the country. The Illinois Business and Industry Profiles hold data on 100,000 employers in Illinois -- all firms with 5 or more employees. This database can be searched by zip code of employer, and other indicators of location, firm size, recent firm growth, and type of industry. A cross-walk to the Career Information System has also been established, to permit users to search certain industries by occupation.)

It is not clear at this point why so few women and blacks were encouraged to use CIS, and further research would be desirable to clarify this pattern. Client response does not seem to account for the differences, because as Table 8 shows, users were uniformly positive about this lesson and no differences were noted by sex.

Age of client affected the use of two lessons -- the Illinois Business and Industry Profiles and "How to Use the Want Ads" (see Table 13.) Those under age 60, particularly individuals in the 50-59 range, were most likely to look at the IBIP. Clients age 60 or over were highly likely to select "How to Use the Want Ads." Client discretion was less a factor in these choices than assignments by counseling staff in most cases.

Those with a high school education or less were most likely to use "How to Fill Out a Job Application," "How to Use the Want

Ads," "Where to Look for a Job," and "How to Search for a Job." These lessons were all originally designed for use by clients in CETA programs and were recommended to counselors in the project as a menu for clerical or blue collar workers. It is interesting that the lesson "How to Fill Out a Job Application" was most used with clients who had less than a high school degree and who had been out of the labor market or unemployed for one year or more. (Table 13.)

The PLATO Career Information System was the only lesson which was most used by persons with educational achievement beyond high school and by those most interested in changing careers. There was no strong association, however, between use of CIS and length of time out of the labor market. The complete picture for CIS, as shown in Table 9, is that the lesson was most used by whites, males, persons interested in full-time employment, individuals willing to consider a career change, and use of the Illinois Business and Industry Profiles, the resume lesson, and the lesson on "Where to Look for a Type." It was negatively associated with vocational lessons such as typing practice. This profile fits well with the professional, managerial, and technical job-seekers who participated in OPERATION ABLE's Older Worker Institute and the Minneapolis Senior Federation program. As will be noted in a later discussion, these persons on the whole enjoyed the most job-seeking success.

As noted above, 79 persons in the project used PLATO for 7 or more hours. These persons were most likely to use more than 1 or 2 lessons and had a high probability (p=.00001) of using the following programs: "How to Search for a Job," "Where to Look for a Job," "How to Use the Want Ads," "How to Fill Out a Job Application," "How to Write a Resume," and "Typing Practice." This represents a fairly complete package of employability skills lessons on PLATO, Career Information System and the Illinois Business and Industry Profiles -- which this group was somewhat less likely to use than those with lower average PLATO usage.

Summary. Median time spent on the PLATO computer system was approximately 1 hour and 45 minutes, with a range of 7 minutes - 45 hours. The average client spent 40 minutes on each lesson, with women and minorities most likely to complete more than 1 or 2 lessons. The most frequently used lesson was the PLATO Career Information System. Clients working the longest hours on PLATO were most likely to be non-white, aged 60-69, have less than a high school degree, see themselves as retired, and have a history of long-term unemployment. These individuals showed unexpectedly strong movement back into the labor market. There was high consensus among all clients on ease of machine use and helpfulness of the automated lessons they tried. Several distinctive patterns in lesson use emerged among younger and older clients, by race and sex, and by educational attainment. This finding was partially expected, because different lesson menus were established for professional and blue collar or clerical job-seekers. Not all differences are explicable on these grounds, however, and further research is needed.

4. Program Impacts on Job-Seeking and Job-Finding Activities of Project Participants

Of the 701 project participants, follow-up post-training interviews were sought with 375 to determine their status in the labor market. These 375 individuals were enrolled in one of the five programs associated with the study -- OPERATION ABLE'S Older Worker Institute Core Training Program for Clerical Job-Seekers (86 clients); OPERATION ABLE'S Older Worker Institute Core Training Program for Professional, Managerial and Technical Job-Seekers (77 clients); OPERATION ABLE'S Job Club for the economically disadvantaged (170 clients); the Waxter Senior Center classroom employability skills program (72 clients); and the Minneapolis Senior Federation employability skills program (25 clients.) Remaining clients in the project either could not be reached or did not use the computer as part of a regularly recurring, structured plan for job attainment.

Thirty days after completion of employability skills training, 136 persons (36.3%) were working. Among the other 239 persons, it was possible to confirm that 41% (97) were still actively seeking work and 14% (33) had dropped out of the labor market. Of the remaining 109 persons, it was determined that they had not found jobs, but no further information was available on whether they were actively seeking work. A comparison was made of the demographic characteristics of this group and others about whom more detailed information had been gathered; no significant differences were noted. Therefore, much of the following analysis concerns only the 266 individuals for whom a fairly complete picture was put together.

Overview of successful and unsuccessful Job-Seekers. Compared to the total project sample, those who found work were more likely to be minority group members who thought positively about career change (Table 14). Persons above age 60 were as likely to find work as those younger. Half had been unemployed for one year or more before coming to the training programs, and lesser education did not appear to be a barrier to job-seeking success. They were looking for full-time work and saw themselves as active labor force participants.

Those clients who had not found work but were still actively looking at the point of their follow-up interview showed several points of difference with the general project sample (Table 15). They were even more likely than successful job-seekers to have been unemployed for more than a year, but showed marked resistance to change in job objectives or career focus. They were a little more likely to have 12 or fewer years of education compared with the total client population. About half were minorities and/or female.

Persons out of the labor market were noticeably different than either the active job-seekers or those who successfully found work (Table 16). These individuals were primarily minorities (70%), female (82%), and somewhat more likely to be aged 60 or over. Although they were on the whole better educated than the job-seekers or successfully employed clients, this was less compelling than the fact that 81% of them perceived themselves as retired. They demonstrated some degree of readiness to consider career or job alternatives, but fell far short of the flexibility shown by the successfully employed group.

TABLE 14

Characteristics of Successful Job Seekers Compared to Aggregate Client Statistics: Operation ABLE, Waxter Senior Center, and Minneapolis Senior Federation

n=136

Characteristic	Successful Job Seekers %	Total Client Population %	Diff.
Minorities	55.9%	49.8%	+6.1
Females	53.7	60.9	-7.2
Persons Aged 60 and Over	33.9	32.5	+1.4
Less than High School Degree	18.9	16.1	+2.8
High School Degree	28.8	22.7	+6.1
See Self as Retired	15.0	15.7	- .7
Unemployed Currently for 1 Year or More	50.0	53.2	-3.2
Seeking Part-time Employment	17.6	21.8	-4.2
Unwilling/Ambivalent about	55.2	65.6	+10.4

TABLE 15

Characteristics of older persons still actively seeking employment compared to aggregated client statistics:

OPERATION ABLE, WAXTER SENIOR CENTER,
AND MINNEAPOLIS SENIOR FEDERATION

n=97

Characteristic	Active Job Seekers % Col. A	Total Client Population % Col. B	Diff. (Col. A-Col. B)
Minorities	48.9	49.8	- .9
Females	55.7	60.9	-5.2
Aged 60+	29.9	32.5	-2.6
Less than High School Degree	21.1	16.1	+5.0
High School Degree	29.5	22.7	+6.8
See Self as Retired	17.3	15.7	+1.6
Unemployed for One Year or More	61.7	53.2	+8.5
Seeking Part-time Employment	18.7	21.8	-3.1
Unwilling/Ambivalent about Career Change	74.6	65.6	+9.0

TABLE 16

Characteristics of persons out of the labor market post-training compared to aggregated client statistics: Operation ABLE, Waxter Senior Center, and Minneapolis Senior Federation

n=33

	Persons out of the Labor Market Col. A	Total Client Characteristics Col. B	Diff. (Col. A-Col. B)
Minorities	69.7	49.8	+19.9
Females	81.8	60.9	+20.9
Age 60+	42.5	32.5	+10.0
Less than High School Degree	12.9	16.1	- 3.2
High School Degree	35.5	22.7	+12.8
See Self as Retired	80.6	15.7	+64.9
Unemployed for one Year or More	60.0	53.2	+ 6.8
Seeking Part-time Employment	18.8	21.8	- 3.0
Unwilling/Ambivalent about Career Change	53.5	65.6	-12.1

Was the project intervention responsible for the success of some individuals in obtaining employment? Did it increase the likelihood that older persons would remain active job-seekers even if they did not find work within 30 days after their training sessions ended? Several indicators may be used to answer these crucial questions.

First, the successful job seekers were more likely to have used PLATO; only 4.4% did not, compared to 6.2% of those still seeking work and 9.1% of persons out of the labor market. Second, successful job seekers were more likely to have used 5 or more lessons on the system -- 24.3% compared to 20.6% actively seeking and 18.3% out of the labor market. Table 12 shows comparative experience and characteristics of two groups at Waxter Senior Center. One group received classroom training without computer-assisted instruction, and the second group used computers intensively -- an average of 6 hours/person or 25% of total training time.

Table 17 shows that there was no significant difference in the job-seeking success of the two groups. Approximately 25% in each found work. However, these results are more impressive when considered in light of the fact that the PLATO group did as well as the non-PLATO group. If characteristics of the PLATO group are examined more closely, it will be noted that these clients have a median age exceeding retirement, are likely to have seen themselves as out of the labor market before training began, and share with the non-PLATO group other characteristics of disadvantagement -- notably minority status and long-term unemployment. While it is outside the purview of this project to construct an index by which relative disadvantagement could be expressed, such a measure would clearly show the PLATO group to be more difficult to place in the labor market relative to the non-PLATO group. Thus, based on this limited evidence, one possible interpretation of the data is that the project helped to increase the supply of labor from persons who had previously withdrawn from the labor force -- a group which has been notoriously difficult to reach in employment programs for the elderly. In short, the PLATO group at Waxter Senior Center suffered from more obstacles to labor market re-entry than did the non-PLATO group, but the PLATO group achieved nearly the same rate of employment as those who were somewhat younger and more labor-market oriented. These results are counter-intuitive.

Stronger indicators of the relationship between use of computer-assisted instruction and job-seeking success are found when data was analyzed controlling for race, sex, education, and age in the four programs studied (Job Club, Older Worker Institute, Waxter Senior Center, and Minneapolis Senior Federation.)

In general, there was no association between time on PLATO and job-finding success for whites. For minorities in the ABLE Job Club and the Older Worker Institute Clerical Program, however, there was a positive relationship between time on the system and job-seeking success, as shown in Table 18.

TABLE 17

Demographic Characteristics and Program Outcomes for Clients at Waxter Senior Center With and Without Computer-Assisted Instruction

Characteristics/ Program Outcomes	n=37 Clients *With* CAI Support in Classroom %	n=35 Clients *Without* CAI Support in Classroom %
Minorities	83.8%	85.7%
Female	62.1	68.6
Median Age	65.3	60.8
Less than High School Education	43.2	48.6
See Self as Retired	64.9	42.9
Unemployed More than 6 Months	93.8	100.0
Seeking Part-time	86.5	71.9
Unwilling to Change Careers	ND	ND
Average Time on PLATO	6.0 hours	0
Found Job	24.2	29.4

Table 18

MEDIAN TIME ON PLATO AND LIKELIHOOD OF MINORITY EMPLOYMENT BY PROGRAM: OPERATION ABLE AND WAXTER SENIOR CENTER*

PROGRAM	MEDIAN TIME ON PLATO Minorities Who Found Jobs	Minorities Did Not Find Jobs	Diff.
OPERATION ABLE Job Club (n=102)	4.3 hours	3.2 hours	+1.1 hours
OPERATION ABLE Older Worker Institute - Clericals (n=33)	4.7 hours	2.9 hours	+1.8 hours
OPERATION ABLE Older Worker Institute - Professionals, Managerial, and Technical (n=9)	2.5 hours	3.0 hours	-30 minutes
Waxter Senior Center (n=9)	2.5 hours	3.0 hours	-30 minutes
MEDIAN TIME, TOTAL MINORITIES			

*Minneapolis Senior Federation is omitted because no minorities were served.

In the case of minorities in the ABLE Older Worker Institute Program for professionals and the Waxter Senior Center, the numbers are too small for meaningful comparisons. No conclusions can be drawn.

Table 19 shows that the most educated clients who found jobs used PLATO more than jobless well-educated individuals. Results are clear and consistent for all programs in the project. Unfortunately, numbers are too small to permit meaningful analysis for those with 12 or fewer years of education. A small positive relationship may be seen for Job Club members who were high school graduates, and a more negative association in that program for individuals lacking a high school degree.

TABLE 19

Median Time on PLATO and Likelihood of Employment by Education: Operation ABLE and Waxter Senior Center

Program	Median Time on PLATO Minorities Who Found Jobs (Col. A)	Jobless Minorities (Col. B)	Diff. (Col. A-Col. B)
Less Than High School			
ABLE Job Club	2.5 hours (n=12)	2.5 hours (n=18)	0
ABLE Older Worker Institute - Clericals	1.0 hours (n=2)	4.0 hours (n=3)	-3.0
ABLE Older Worker Institute - Professionals, Managerial, and Technical	5.0 hours (n=1)	5.0 hours (n=1)	0
Waxter Senior Center	1.0 hours (n=1)	4.0 hours (n=1)	-3.0
Minneapolis Senior Federation			
High School			
ABLE Job Club	4.0 hours (n=14)	3.5 hours (n=47)	+.5
ABLE Older Worker Institute - Clericals	3.0 hours (n=9)	4.0 hours (n=15)	-1.0
ABLE Older Worker Institute - Professionals, Managerial, and Technical	3.0 hours (n=1)	3.2 hours (n=1)	-.2
Waxter Senior Center	3.0 hours (n=1)	4.0 hours (n=1)	-1.0
Minneapolis Senior Federation			
More Than High School			
ABLE Job Club	4.5 hours (n=18)	3.5 hours (n=36)	+1.0
ABLE Older Worker Institute - Clericals	3.0 hours (n=14)	2.4 hours (n=18)	+.6
ABLE Older Worker Institute - Professionals, Managerial, and Technical	6.5 hours (n=36)	3.5 hours (n=21)	+3.0
Waxter Senior Center	3.0 hours (n=36)	2.4 hours (n=21)	+.6
Minneapolis Senior Federation			

Examined from a slightly different perspective, if all those actively seeking work are combined with persons who found employment, and clients are excluded who dropped out of the labor market, one finds that about 22% of all clients spent more than 90 minutes PLATO irrespective of educational level. There was an appeal across the spectrum. A tendency can be noted, however, for those with college experience to work at least 30-90 minutes, while those with less education tended to spend the least time. ($X^2=11.60$; 3df; $p = .003$). The data show a stronger propensity among those without work and/or out of the labor market and who have limited education to spend little or no time on PLATO.

Those clients aged 50-59 who successfully found work used PLATO more than did unemployed persons in this age group. No other associations were noted controlling for age.

The most exciting results occurred in analysis of data by sex. Women who spent more time on PLATO were most likely to find jobs compared to those women who did not use the system as much. These findings are consistent across all structured programs in the project. Table 20 shows these findings. It may be recalled that, overall, men were more able to find work than women. However, women with more intensive PLATO use were also generally more successful than women who spent less time on the system as Table 20 shows. Results for males are less consistent, with no difference in job-seeking success and median time on PLATO, and a negative relationship for clerical workers in the Older Worker Institute.

There is an interesting tendency for persons who were successful in finding work to use fewer lessons than unsuccessful job-seekers. One has the impression that the length of time on system was more significant than the amount of exploration done across a number of lessons. Since the purpose of the project was not to acquaint older people with the scope of CAI on the system, but rather to improve employability skills, this result would seem reasonable.

Table 20

Median Time on PLATO and Likelihood of Employment by Sex: OPERATION ABLE and Waxter Senior Center

PROGRAM	Women who Found Jobs (Col. A)	Jobless Women (Col. B)	Diff. (Col. A - Col. B)
ABLE Job Club	4.3 hours	3.2 hours	+1.1 hours
ABLE Older Worker Substitute - Clericals	4.8 hours	3.2 hours	+1.6 hours
ABLE Older Worker Institute - Professionals, Managerial and Technical	4.5 hours	3.0 hours	+1.5 hours
Waxter Senior Center	4.5 hours	3.0 hours	+1.5 hours

B. DISSEMINATION RESULTS

In order to facilitate the replicability of the program interventions developed and evaluated on this project, several lines of dissemination activity were carried out: packaging of program materials (including an instructor's manual which contains all paper materials and screen facsimiles of computer-assisted lessons); direct contacts with private sector firms that might be interested in publishing and marketing this program; and professional presentations at meetings and conferences of public sector agencies. A brief summary of the major activities and outcomes of each of these lines of action follows.

1. Program Packaging

Starting materials for this project included paper materials used by the Job Club at Operation ABLE, paper materials used at Waxter Center, PLATO computer-assisted lessons in employability skills, and the Career Information System and Illinois Business and Industries Profiles file (the latter two also on computer). Initial plans were to adapt these tested and successful materials to the needs of older job seekers and integrate the on- and off-line components into a single well-defined program.

Both paper and computer materials were extensively revised and a number of new computer lessons were developed to provide computerized support at critical points of the program. In addition a completely new program design was developed by the time the third research site (Metropolitan Senior Federation) began. This design has been incorporated into a two-volume program manual for instructors which includes a detailed activity schedule for each class sesssion, and incorporates on- and off-line components. The Program Manual describes six class sessions (each of three hours duration):

Session I: You Can Succeed

Session II: Getting Ready for the Right Kind of Work

Session III: Putting Yourself in Writing

Session IV: Finding Interview Opportunities

Session V: Succeeding in Your Job Interview

Session VI: Retaining Your Job and Developing

The Program Manual contains complete copies of all paper materials, descriptions of role play and other group exercises, facsimiles of computer screens, and some theoretical background for instructors. A second volume contains an introductory section with tips for the instructor, how to set up the physical environment, an explanation of the work adjustment hierarchy, and an overview of the program. In addition it collects alternative and supplementary program materials and specific references to books and other information sources for the instructors.

Software used on this project was packaged in a set of menus tailored to the job search assistance programs at each site. A one-volume computer training manual was also developed for staff and is available as a companion reference to the program manual. This computer training manual uses screen facsimiles to demonstrate how instructors can set up software menus for individual students, check progress statistics, modify the student menus, print student records, and recycle the space as students finish the program and new students arrive. Since the three research sites in this project had full accessibility to two large counseling-support databases--the Career Information System, and the Illinois Business and Industry Profiles--and to electronic mail, complete instructions in the operation of all three of these facilities are included in the staff computer manual.

Since each of the three research sites had access to a PLATO system and to the University of Illinois PLATO software, the computer manual is written in terms of PLATO system screen facsimiles, key presses, and functions. In any application or transfer of this software to other systems, similar operations will be needed. Thus this manual will serve as a guide for a staff manual to accompany any new system to which this software is transferred.

Copies of the two-volume Program Manual and the Staff Computer Manual will be made available through the University of Illinois and/or Operation ABLE at costs of reproduction.

2. Private Sector Contacts

In order to stimulate private sector interest in this project, two distinct strategies were employed. One was to approach private foundations for continued support. A second was to approach software firms to market and disseminate the project program.

Several foundations have been contacted. To date Mott Foundation and Bush Foundation have both agreed to provide resources to help continue the program set up at the Metropolitan Senior Federation. Operation ABLE has also been in contact with Levi Strauss and other foundations for support in replicating their ABLE network. ABLE replication now includes the computerized component developed on this project.

A meeting was held with a representative from the Mott Foundation to discuss participation at a Fall 1985 Conference on Technology and the Agency. Arrangements are being made for a project presentation at this conference.

To stimulate private sector interest in disseminating the products of this project, early contacts were made directly with a number of private firms with the capability of marketing and disseminating software packages. Three large firms and one small local software development firm were chosen: Control Data Corporation, IBM, APPLE, and DUOSOFT Corp. In addition, contact was also established with LINC Associates, an organization which attempts to facilitate publishing and marketing of software products, and which was under an HHS contract for exploring dissemination possibilities for software produced under HHS grants.

Since the software as adapted and developed on this project was on the PLATO system, the potential for widespread dissemination through the University of Illinois PLATO network was also explored, and availability of authoring systems for transfer of this software to IBM PC and APPLE was also examined.

Although the University of Illinois PLATO network is a public sector entity, it will be considered here, since it clarifies the discussion of dissemination possibilities through Control Data Corporation.

All software used on this project is now directly available through the University of Illinois PLATO network--including the Career Information System, the Illinois Business and Industries Profiles, all new and adapted employability skills lessons, instructional management software, and tailor-made menu packages which correspond to the complete on- and off-line program described in the two-volume Program Manual (see above).

There are currently 1,300 terminals connected to the mainframe computer located at the University of Illinois in Urbana-Champaign. This network extends across the U.S. to Hawaii and includes schools, colleges, universities, military training facilities, prisons, hospitals, and employment and training organizations. Among this nationwide network of 1,300 terminals, more than 300 of these terminals are located in programs that serve targetted HHS populations--including mentally disturbed, economically disadvantaged, minorities, adjudicated offenders, and elderly. All of these agencies now have direct access to the software developed on this project. What potential is there for expansion of this PLATO network to more agencies specifically serving elderly?

The Computer-based Education Research Laboratory (CERL) has embarked upon a large-scale expansion campaign that is expected to quadruple the size of the network within the next two years. This expansion is built upon three new technologies developed at CERL: a new high-resolution, smart terminal which costs under $1,000; a new central computer design that uses off-the-shelf cards, and will be ten times more powerful than the present central computer but costs no more to operate; and new communications technologies that will allow for utilization of satellite and cable TV channels, and which will provide some hedge against continuing increases in long-distance phone toll fees. It is expected that these new technologies will result in significant cost reductions for PLATO, and will have three major market impacts for PLATO: a much higher penetration into public schools; a significant penetration into the home market; and the capability for small social service agencies to take advantage of the network capabilities and integrated service capacity of the PLATO system.

Since the University of Maryland PLATO system was used for delivery of software to the Waxter Center research site, it also currently holds transferred copies of the software developed on this project. This software is directly available now through the University of Maryland PLATO system.

Contacts with Control Data Corporation. The next most natural mechanism for dissemination of program materials developed on this project is Control Data Corporation (CDC). CDC operates several PLATO systems commercially, and markets PLATO systems. They include an Education Company which publishes and markets PLATO software. Contacts were made with the person in charge of software acquisition for the CDC Education Company, and with division heads of three other separate divisions, including Vocational Education, and Adult Education. In addition, a meeting was held with the director of Consumer Acquisition. In each case, the products from this project were described and summarized and proposed for acquisition, publication, and marketing by CDC. CDC has indeed expressed great interest, and contact has been maintained with CDC by Operation ABLE. Apparently, the elderly are not a market segment targetted by CDC, but CDC has expressed interest in considering this, and has encouraged Operation ABLE to continue its correspondence with CDC.

Since some of the software in this package was developed prior to this project under other auspices, there is split ownership. For example, a key element for the program and for CDC's expressed interest is the Career Information System which is owned by the State of Illinois under license to the University of Oregon. Considering the size and complexity of CDC and its product acquisition procedures, and the split ownership of some of the software, it is likely that six to twelve more months of negotiation may be needed before a commitment or definite rejection to the marketing of this program will be made by CDC. All parties are in favor of working out an arrangement, and remain optimistic.

In order to expand market potential beyond the mainframe environment, alternatives were explored for transfer and marketing of the software on major microcomputers. Several authoring systems have been identified which provide the capacity needed to transfer the software. One is called TenCORE for the IBM PC and a related product called enBASIC for APPLE. Both of these are authoring systems which have many similarities in syntax and format to the PLATO author language TUTOR, and would make transfer of project software very convenient. In addition, an authoring systems called

Trainer 4000 for IBM PC has many similarities to TUTOR in capabilities--including graphics and student response manipulation capabilities. Although it differs considerably in format, it would also provide an avenue for transfer of software from TUTOR to IBM PC. Consequently, it was decided that both APPLE and IBM should be approached for purposes of disseminating this program.

Meetings were held with the director of marketing for IBM in the area of social sciences, and with the director of corporate grants for non-profit agencies for the APPLE Foundation. Correspondence was also exchanged with the director of the Community Services Division of the APPLE Foundation. In each case, interest was expressed, and project summaries were sent. Both IBM and APPLE still represent viable possibilities for project dissemination.

Another avenue for possible dissemination was taken in contacting DUOSOFT Corporation. This small software development shop is located in Champaign, Illinois and has special staff capability for transfer of PLATO materials to other systems--including CDC, IBM, APPLE, TRS-80, NEC, and others. DUOSOFT's strategy is to provide the technical services for identifying and transfering courseware to a given system, and to make an arrangement with an established publishing house for marketing and dissemination. They were provided with a project summary which they have taken to several meetings with company representatives, including IBM and McGraw Hill. They have come back interested in developing a demonstration lesson for the IBM PC. Unfortunately, for the last six months, they have gone through a production slow-down, and progress on this project has been suspended.

A meeting was held with the director of LINC Associates. This organization attempts to facilitate the connections between software developers and publishers/marketers. At the time they were contacted, they were providing these services to HHS projects under an HHS contract. Consequently LINC Associates may be able to provide further possibilities that should be pursued.

Summary. There are seven salient conclusions on private sector dissemination activity:

- Private Foundations have been contacted and asked to help to fund continuations of this project. To date, Mott Foundation and Bush Foundation have provided funds to help the Metropolitan Senior Federation continue its program, and Levi Strauss has been contacted. Also, a representative of Mott Foundation has expressed interest in having a project presentation at an annual conference on Technology and the aging.

- Project software is currently on the University of Illinois PLATO system and University of Maryland PLATO system. Any expansion of either of these networks automatically extends the availability of project software. UI PLATO network already reaches 1,300 terminals nationwide, of which 300 serve HHS-targeted populations.

- UI PLATO expects a four-fold expansion within the next two years and a significant drop in costs of UI PLATO to agencies. This should enable more programs that serve elderly job seekers to take direct advantage of project software.
- The two-volume Program Manual and accompanying one-volume staff Computer Manual are available now at reproduction costs, and provide a beginning basis for program replication.
- Control Data Corporation has expressed specific interest in this program. Even though the process is likely to be long and complicated, CDC represents a very hopeful possibility for dissemination.
- Authoring systems do exist for translating project software to other major systems, including the IBM PC and APPLE. Consequently, a second way to achieve wide-scale dissemination is to work through a small company like DUOSOFT to provide results to IBM and to McGraw Hill.
- LINC Associates has been contacted, and hopefully will be able to provide some dissemination services under their HHS contract.

3. Public Sector Contacts

In order to stimulate public sector interest in this project and in applications of computerized learning in job search assistance programs for the elderly, an extensive program of public presentations was carried out. A list will be presented here of specific conference and professional presentations made on this project. Of course, as mentioned in the previous section, availability of project software on the PLATO systems of both the University of Illinois and University of Maryland represent public sector means of disseminating this program.

Presentations:

1. May 29-30, 1984: Washington, D.C. - HHS Meeting for Administrative staff and other agency staff.
2. June 18-19, 1984: Helena, Montana - Governor's Council on Aging and Dept. of Labor, Employment and Training Division; a video-tape of the project was shown; eighty trainees.
3. August 2-3, 1984: Chicago - Region V Training Session for Area Agency and state staff; 125 from six states.
4. September 30 - October 2: Chicago - Illinois Dept. on Aging statewide conference.

5. October 2, 1984: Minneapolis - APWA Central States Regional Conference.

6. October 23, 1984: Denver 0 Governor's Older Worker Conference.

7. November 16, 1984: Chicago - Women in Charge Conference.

8. November 19, 1984: Kansas City - Mid-America Conference on Aging.

9. December 3, 1984: Washington, D.C. - HHS Update Session.

10. ABLE Job Fair - June 14, 1984.

11. ABLE presentations on 5 radio shows; 13 newspaper articles; and two local agencies demos (with terminal).

C. PROGRAM DEVELOPMENT RESULTS

Much project activity was directed toward adaptation of existing program materials and the development of new program materials. Both paper and computer materials were adapted and/or developed. As described above, a new program design with instructors manual, paper materials, prescribed computer materials, and role play and group activities was developed as part of this project, and is available for use by other agencies. In this section a brief summary of software revisions and development will be provided:

1. New Software Developed:

1. Functional Resume lesson -- teaches how to develop a skills based resume; presents examples from one of several professional-technical areas. This lesson allows the client to develop a resume online and print it out on an attached printer.

2. Networking -- how to use your personal network of contacts in finding leads for jobs.

3. How to Listen in a Job Interview -- Interviewing the Employer -- listen for what the interviewer wants from you; what the job really entails; whether this is the right job for you.

4. Questions that are Hard to Handle -- what to do if the interviewer asks your age, or general questions about your health, religion, etc.

5. Job Benefits -- Pay attention to the benefits that go with a job; how to compute what they are worth.

2. Revisions to Existing Lessons:

1. How to Fill Out a Job Application -- eliminate questions on age, H.S. graduation, and other offensive questions.

2. How to Write a Resume -- even with the Functional Resume lesson, some clients still prefer this other form; made birthdate optional; added a branch for persons with no labor market experience but with volunteer service or other relevant experience; provided format for recently acquired education; made order of employment history and other items more easily changeable so that more than one resume can be easily developed on line.

3. How to search for a Job -- content changes to provide more relevance to older job seeker.

4. Where to Look for a Job -- include some mention of networking, and accept responses keyed to the serving agency.

5. Design changes to CIS -- simpler choice format presented to HORIZONS; awaiting their approval.

6. Instructional management software -- extensive changes for simplification to instructors; including locate client's roster, print group records, try-out menu of newly developed courseware for testing, on-line catalog of lessons and assignments, on-line changing menus, welcome page to the ABLE program.

7. Data collection software -- user log for Career Information System extended, log developed for Illinois Business and Industry Profiles, lesson log instituted for all individual lessons.

8. Data analysis software -- aggregate statistics capability installed in CIS user log, dump program for SPSS tape.

All of the adaptations to lessons and new developments were done in conjunction with ABLE staff on-line comments. They reported their reactions to lesson materials as well as client reactions. In analysing patterns of these comments, the following guidelines have been developed for adapting software to the needs of elderly job seekers:

1. Introduction and orientation to CAI should be slow-paced to allow student to acclimate to this new learning method. There are two separate steps. One is to learn to operate the keys and watch the screen for directions -- that generally takes 3-5 minutes for all students of any age. The more significant step is to "get the feel" of the system, to build a set of expectations that are reasonable and correspond to what the system can actually deliver. Project

observations indicate that this step is a more critical one for the older learner -- learning a new way to learn. Once this happens, the student can proceed as easily and rapidly as younger students can.

2. Lesson content must build upon elements that are already familiar.

3. Lesson content must be relevant to the life experiences and concerns of the student, and should be non-ageist, focused, and concrete.

4. Learning objectives should be explicit prior to use and should connect to the learner's interests and needs.

5. Tighter synchronization between on- and off-line program components; program should include paper, role play and experiential activities when appropriate.

6. Explicit learning transfer activities that provide content introduction prior to use of computers and follow-up discussion and consolidation after.

7. Mistakes by learner minimized; ample positive reinforcement and encouragement.

8. Graphics, simulations, and other non-verbal modes used as much as possible to supplement verbal presentations.

9. Lessons should be medium length -- short sessions seem less successful with elderly than with younger students, and success of longer sessions varies with the student.

10. On-line help and prompts -- especially on first few software lessons, this is important for the learner's self-confidence and satisfaction with the system.

11. Display size and clarity -- very important, though it is not necessary to use extra large print size or bold type face.

12. Rapid screen response and rapid feedback -- these two separate factors are related and seem necessary at the beginning to help the user over the initial learning hump, and afterwards to keep the users interest and attention.

BLANK PAGE

IV. DISCUSSION AND IMPLICATIONS OF RESULTS

A. Significance of Project Results in Relation to the Usefulness of CAI for Older Job-Seekers

The objectives of the project were:

1. To increase the effectiveness of job search training and employment assessment programs through use of specially adapted computer-assisted instruction and guidance software;

2. To stimulate industry and government interest in the dissemination of software which meets the special needs of older workers.

Project results suggest a potentially significant role for CAI in addressing the needs of those older persons who are most disadvantages in the labor market.

Study results show that despite greater handicaps of advanced age, longer periods of unemployment, and lesser education, minorities were equally as likely as whites to have secured employment 30 days after training. Minorities were most likely to use PLATO intensively -- 7 or more hours, or between 25% - 40% of classroom time, as opposed to median use of approximately 90 minutes for the total sample. Intensive users were also highly likely to be age 60 or over, lacking high school diplomas, unemployed for 12 or more consecutive months, and to perceive themselves as retired. This profile is important because it resembles clients frequently found in retirement or public housing programs throughout the country and the population which the Administration on Aging and Area Agencies have most frequently addressed. Most significantly, research findings gave some support to the hypothesis that blue collar minorities who were most successful in finding employment also used the computer more extensively.

The strongest and most consistent association between use of the computer and job-finding success was noted for women, irrespective of the type of program in which they were enrolled. These results are especially noteworthy in light of the literature on computer anxiety in women and the intuitive assumption often made that older women will be more baffled and threatened by electronic technology than men. When it is recalled that the majority of women in the project were also minority group members, one conclusion is that this disadvantaged group has great potential for a highly productive response to computer-assisted instruction in job search training.

The results of this project indicate that there is a justifiable basis for continuing to explore the relationship between computer-assisted instruction and improved employability of older workers. Irrespective of very different program settings and geographic areas, the more a disadvantaged older person used PLATO, the more likely he or she was to find work. The data do not support a causative inference, but the relationships are generally positive, consistent, and well-defined. Even without controlling for the effects of race, sex, education, and age, the data also provide support for the argument that the oldest workers who face other multiple barriers to labor market entry (minority status, limited education, prior long-term unemployment) will be as successful as younger, better educated workers, aged 50-59, in obtaining employment. Computer-assisted instruction may be more effective than other methods for attracting and retaining program participation of individuals who are partially or fully retired.

Research findings support the assumption with which the project was originally undertaken -- that older people would respond enthusiastically to opportunities for computer use, would find keyboard and screens easy to use, and would perceive the experience as useful in relation to job-seeking goals. Many adaptations in software content were, however, necessary in order to enhance specific appeal and relevance to job search problems of the elderly. It is not known at this point to what extent these enhancements would have promoted job-seeking success even further, because software adaptations were not completed until the last four months of the project period.

The second problem addressed by the project -- that of stimulating private sector interest -- proved more intractable than anticipated but potentially hopeful at project close. National marketing and effective dissemination of project software packages requires the commitment of a major firm such as the Apple Corporation, IBM, or Control Data Corporation. The complexity of these firms and their internal decision-making processes means that a longer timeframe is required than this project allowed, if the objective is to ask a major corporation to adopt a new direction in its marketing and production strategies. Furthermore, marketing data from corporations like Control Data Corporation do not at present support the argument that there is significant demand for software among older consumers or agencies serving the elderly. However, it was the impression of project staff that these surveys had not been well-conceived in their definition of users, particularly organizational users. (For example, Area Agencies on Aging and their sub-grantees had not been included.) At project end, Control Data Corporation continues to express interest, particularly in the career and labor market information components of project software.

B. Problems Encountered

In any field trial, numerous anticipated and unanticipated problems inevitably arise. This project was fortunate in encountering few insurmountable difficulties.

The primary obstacles to planned implementation were: (1) Instability in project structure at the three research sites; (2) insufficient time for project implementation at Minneapolis and Baltimore research sites; (3) Low integration of computer and classroom at the ABLE site; (4) budget limitations for research follow-up which constrained timely and complete assessment of impacts; and (5) lack of sufficient professional support for training at the Minneapolis site. These problems are discussed in some detail below.

At OPERATION ABLE, the project was originally to be housed in the Older Worker Institute. The Institute Director was to supervize the ABLE site coordinator, Rhea Bertelli. However, within the first three months of project start-up, the OWI Director resigned. The counselor who remained had not been involved initially in project planning and was reticent about its value. The new OWI Director was more helpful, but felt that the terminals were disrupting Institute activities due to referrals from other ABLE programs. The terminals were subsequently relocated 8 months after start-up, now housed in an area continguous to the ABLE Job Club. By the conclusion of the project, staff had reached a concensus, that Job Club clients were the most "natural" users of the system. Referrals from persons in ABLE's temporary help program had also been initiated.

The consequence of this flux in leadership and internal auspice was to reduce the effectiveness of the site coordinator in negotiating learning objectives and in promoting integrated development of classroom and computer-based content. Hours of use by clients were also reduced below the level originally hoped for, to an average of 1½ - 2 hours per client. This meant that no test was ever made of whether PLATO could improve efficiency of learning and thereby allow the agency to handle greater numbers of clients with equally effective outcomes. (This question, of course, is crucial to assessing cost-effectiveness of computer use in job search training programs.) It also meant that clients may not have received the intensity of computer exposure needed for discernible learning outcomes.

At the Waxter Senior Center, the project was set up as a temporary extension of a long-running employment program which was in the process of permanently shutting down. When negotiations for the Waxter site began with ABLE, Baltimore's JTPA allocation was not known. Subsequently, after the ABLE agreement was in place for the project, it was discovered that the city would be losing about $112,000,000 for federal employment programs, and the Waxter Center was scheduled for shut-down. It was originally hoped that project results at that site could be generated early enough to permit application for state-administered Title III JTPA funds. This would have permitted continuation of project activities. Unfortunately, unlike many states, the Maryland state manpower agency decided that job search training could not be funded under Title III. Thus, during the last month of project operation, the site coordinator was in the process of seeking alternative work and there were persistent internal reorganizations in response to retrenchment. The main effect on project outcomes was a breakdown in organization of some of the basic demographic data, incomplete reporting on the small-group discussion sessions, and loss of daily PLATO logs from this site. Loss of the logs was probably not too serious, because the data from ABLE were so uniformly positive for more than 500 clients -- a fair test, perhaps. Program implementation itself was not so much disturbed as certain aspects of the data collection process. Findings could not be reported on 72 of the 150 persons served. However, those 72 persons were involved only in small groups discussions which met once for 90 minutes, with an accompanying PLATO demonstration. The effects on job search behavior would have been interesting but were expected to be weak.

Program structure at the Minneapolis Senior Federation represented a large issue. The Federation had no previous direct service experience; it functioned as a membership organization, advocating for health-related concerns of its 40,000 fee-paying members. Establishing a "Career Options Center" was a new thrust. While certain members of the Board (including the President-elect) firmly supported this idea, others were reluctant to adopt a second focus.

The Federation supports fewer than 10 professional staff, with considerable assistance provided by volunteers. The organization decided to implement the program using volunteers with some supervision by one professional staff person. One of the volunteers was involved with the professional staff in negotiating the sub-contract with ABLE. Five others expressed interest in leading the training.

As program implementation proceeded, several problems occurred. Ambivalence on the Board about the thrust of this project meant that the professional staff person was not given sufficient released time to mount and supervize a wholly new program. Despite initial commitments to remain for the duration of the project, there was a 65% turnover in volunteers conducting the training. The original group, which had been intensively oriented by the University of Illinois, gradually dissapated, leaving new individuals who did not conform enough to the curriculum developed by the University. Planned PLATO usage fell from 35% of total program to about 10%, or 2 hours per participant. The CAI intervention was thus much weaker than planned, and the high degree of integration with classroom content was attenuated. Follow-up was also to be conducted by volunteers, who ultimately contacted 25 of the 33 project participants, but did not complete the follow-up form used on the project by the other two sites. Thus, job status is known but little else about these individuals. Initial assessments were completed, on the other hand, for all participants.

In retrospect, it seems clear that expectations were unrealistically high for what might be achieved at the Minneapolis site. The Reagan Administration's keen interest in the potential of volunteers was an influential factor in the selection of this site, particularly because it was one which used private resources to support all its initiatives. The potential of drawing from a pool of 40,000 members also had seemed promising. If the project had operated successfully at this site, it would have opened some intriguing new avenues for low-cost, locally supported CAI applications in employability skills development programs. It was reluctantly concluded, however, that a solid professional component is essential to conduct of the project, irrespective of how carefully structured the curriculum may be. Further, a new project which involves use of unfamiliar technology -- no mater how "user friendly" the software or the educational management system -- simply cannot be effectively implemented and measured for meaningful outcomes in a period of 3-4 months. (The cooperating research sites had been scheduled to operate longer in the original grant proposal, but were cut back both in number of terminals and length of operation as a result of project budget reductions.)

Budget cutbacks also reduced the grant-supported research and evaluation component to .25 FTE for 17 months, which also included responsibilities for all report preparation, drafts of public materials, site monitoring, development of off-line training materials, and inter-site liaison. The impact on the project is that an assistant could not be hired expressly for data collection at each site. As was noted above, the performance of site coordinators in this area was deficient.

Overall effects of these problems on project outcomes were as follows: (1) Employment of older clients may be understated, due to gaps in follow-up procedures. (2) Positive project results were achieved even under unfavorable conditions for implementation at Waxter Senior Center and Operation ABLE. Thus, impacts may be understated. On the other hand, social agencies typically operate in a turbulent policy environment, and it is important to learn that ideal conditions are not required in order to achieve gains. (3) Professional leadership in training and computer implementation is crucial. The site which minimized this component did not meet its target of 150 persons served and did not implement computer use as intensively as planned. This site cannot be considered successful from the perspective of testing CAI, but it did attract subsequent private sector resources to support on-going employability skills training. Because the population of 33 served by the Federation so closely resembles the men enrolled in ABLE's Older Worker Institute for Professional, Managerial, and Technical persons, it is believed that research findings are little affected.

C. Implications of Unexpected Findings

There were several unexpected findings in the study. First, follow-up analysis revealed a small number of older clients (aged 60 or over) enrolled in employability skills training even though they did not expect to seek work at all. Interviews with a few of these individuals at the Waxter Senior Center revealed that some minority elderly saw the transmission of job-seeking skills as an inter-generational responsibility -- part of their role as grandparents or in work with youth groups at church. This is an intriguing perspective of how unemployment issues might be tackled as part of other strategies for reducing minority youth employment.

Second, the project attracted few minority males or white females. While the poverty rate is greater among black females than white women, so that disproportionate representation of blacks might be expected, it is difficult to explain why so few white women became involved. The question of racial balance in the classrooms is not an explanation (that is, that whites are more sensitive than blacks to minority status and tend to avoid group situations in which there are fewer than 50% white.) At the Minneapolis Senior Federation, virtually all participants were white, and the racial mix in the Older Worker Institute Clerical program was approximately 50% white, 50% minority. Limited minority male participation is also difficult to explain and bears further investigation.

Minorities were disproportionately represented among those who received no CAI experience on the project at all. It was earlier mentioned that those with least education were also least likely to use PLATO, and proportionately more minorities in the sample had less than 12 years education. Computer anxiety may have been greater among this group, although other project findings would contradict this interpretation. Counselor selection might have been a variable, but this would require additional study.

The powerful association between race and many other project findings was much more pervasive than expected, ranging from patterns of lesson usage and likelihood of intensive system use to relative success in job-finding efforts. The benefits of the project for benefitting disadvantaged elderly blacks, in particular, seems surprisingly great. Computers are a tool for empowerment. Not only does the project show that virtually all elderly respond positively to this experience, but the group which stereotypically would be least perceived as having motivation to use this tool is in fact the most strongly motivated. In general, the picture which formed of project participants was one in which vigorous, flexible older minorities at or past retirement brought considerable strength to their job search effort. They exploited PLATO. They exploited the job market. They exploited their classroom experiences. By contrast, interviews and observation suggested that many of the younger male whites, 50-59, had reasonable credentials on paper but were in fact undergoing a variety of personal problems from alcoholism to depression. No data was collected on the mental health status of project participants, but the impression is that whites tended to be psychologically less robust than their older minority colleagues.

One of the troublesome aspects of project findings was the high probability that minorities and women would not be assigned work on the PLATO career information system. The automated delivery of labor market information and computerization of interest assessment instruments has boomed over the past 15 years. Again, younger persons have benefitted far more than older persons, partly because of the settings which have been selected -- e.g. secondary schools and community colleges. It is believed that lower-than-expected use of these databases on PLATO was a function of counselor preferences, not client interest. Daily PLATO logs show a relatively high degree of of client satisfaction with the career information system irrespective of race or blue collar/white collar status. The counselor at ABLE verbally reported difficulties; the teacher at Waxter Senior Center reported none initially. However, use of CIS was discontinued at Waxter Center because the database was limited to Illinois information, which clients found confusing. Earlier research has shown that minorities must rely much more heavily than whites on formal sources of labor market information in job-seeking activities. One would have hope for project results which showed higher, rather than lower, use of this information on the system. One negative construction is that minorities were not seen as likely to understand or use the system. Another possibility is that the software did pose problems which were not documented at the ABLE site. Other explanations would require further research.

Discrepant findings were noted in project results for whites, males, and the least well-educated. In general, white males showed little benefit from CAI, with the exception of those with some college experience or advanced degrees. The latter were distinctly more successful in finding employment and showed more intensive system use. Nevertheless, one would expect more highly educated individuals to compete more effectively on the labor market in any case, and the relative contribution of CAI to that outcome was possibly moderate-to-negligible. It is not clear why white males were least responsive in this study. Possible explanations include (1) actions by counselors which did not help clients tailor this experience to their needs; (2) inappropriate software--or software which was perceived by staff (not clients) to be inappropriate; (3) presence of more resources and prior experience for this group, diminishing the role of CAI; (4) less sense of empowerment because of prior familiarity with home computers and relatively stronger social status; and (5) personal objectives or self-perceptions which acted counter to the purpose of CAI in the program. Further research would be needed to clarify this picture.

The tendency of persons with the least education to have little or no PLATO experience in the project also lends itself to numerous interpretations. Site observations at projects other than this one has led Flynn and DiBello to at least one tentative hypothesis. Counselors tend to have high initial anxiety about the ability of poor readers to use CAI. Clients themselves face the system with initial concern (usually irrespective of educational level if they have not used computers before.) With the first few problems or complaints voiced by a client as he or she begins, the counselors seem more likely to give concerned support to the better educated client--and to remove the less well-educated client from the system. Lesson assignments must be carefully considered for this group, and with the standardization of menus for this project, some clients may have been deterred.

D. Implications for Theory and Practice

Most social service practice is guided by conventional wisdom or public policy rather than organized theory. Until this point, intervention strategies using communication (rather than concrete services) as the medium for creating change have relied exclusively on talk, print media, and films. Service programs offering counseling or instruction to older persons have been typically based on the assumption that older persons will learn best from verbal presentations and small group interaction. Programs operating from this model have been, of necessity, labor intensive and low volume in scale.

This project begins to offer grounds for arguing that a computer-assisted learning mode is entirely congenial to a wide range of older adults. Approximately 10% appear to learn better in this way than any traditional alternative, and these persons are among the most disadvantaged in the older client population. Unexpected differences in the responses of minorities, women, and retired persons found in the research suggest that better targetting of the CAI experience to those most likely to profit might reap rich programmatic results. While the computer cannot teach social skills such as interviewing without other reinforcing modalities such as role playing,* it can rehearse clients for engagement in new or threatening experiences, improve client's retention of crucial principles, and offer the older person renewed sense of confidence and empowerment.

The project did not in fact test whether self-paced learning would permit introduction of greater client volume with the same number of staff while retaining or improving positive program outcomes. Although this was one of the original purposes of the research, it is now clear that a year is needed to establish the appropriate internal organizational structure and related curcuriculum revisions before variations can be introduced in client flow or other basic program characteristics.

Experience in the project makes clear that the greatest source of resistance to CAI lies not with the client but with the practitioner. While administrative and research applications of computers are gaining greater acceptance, the social service professionals and staff in the voluntary network remain deeply conservative about what constitutes an effective technique for delivery of service. For example, relationship-building is often seen as a vital key to stimulating change or insight in a client. Most professionals will accept that relationships can be instituted and possibly maintained through such media as the telephone or the written letter, but reject the notion that electronic mail or computer conferencing might achieve the same objective. Similarly, the emphasis on direct verbal interchange for teaching skills or addressing personal problems leads to the conclusion that role rehearsal which an individual might silently conduct while using a CAI lesson is less "real." At the same time, professionals will acknowledge that most programs today no longer permit the leisure of long-term relationships, intensive interchanges until mastery is achieved, or even much individualization.

At the other extreme, CAI classes in which the client is left largely to fend for himself/herself are not likely to be effective. The project has shown that strong professional leadership in the context of clear expectations and a well-defined curriculum comprises the basic groundwork upon which CAI applications must be built. Use of the computer is not an end in itself -- and this becomes a seductive objective in programs which have newly introduced the technology. It was necessary throughout the project to guide some staff constantly away from the temptation to "demonstrate" the computer to clients, to talk about system characteristics, or to refer to the total learning experience as a "computer project" The computer should be transparent to the user, just as a ball point pen, textbook, or film projector is.

E. Significance for Communities, States, and Public Policies

Local Communities. One of the persistent problems experienced by senior employment programs in local communities is outreach. For neighborhood organizations, outreach may be less a difficulty than experienced staff with a background in assessment, labor market information, and employment counseling. Most local organizations have few staff relative to numbers of persons needing service. Equipment budgets tend to be tight, with administrative needs often taking precedence. An added complication is high staff turnover, prompted by low salaries and the attractiveness of other positions for young, career-oriented employees. Perhaps most importantly, from an economic development perspective, the overwhelming majority of traditional and neighborhood services for older persons have historically focused on problems other than those of employment and lack in tradition of expertise in the area.

The use of CAI for employability skills training and to deliver current labor market/occupational information for clients would represent a cost-effective means of addressing the lack of prior experience, gaps in current staff capability, and problems in continuity caused by staff turnover. While the current project did not directly measure effects of computer support on outreach and program retention, other studies with younger populations have showed a positive relationship. Counselors at the three research sites all noted that individual interest was piqued by the presence of the terminals, even when accompanied by some initial personal anxiety. Older women, in particular, saw the experience as a means of building new communication bridges between themselves and their children or grandchildren -- and with the wider society which has taken this innovation so much to heart.

The ability of local agencies to support computer technology should grow increasingly, despite retrenchment, due to steadily declining costs in hardware purchase, the widening availability of used or donated equipment, and the growing compatability of software on such disparate systems as IBM and Apple. Start-up costs remain high, both in time required for these programs to adapt to new styles in service delivery and for acquisition of necessary software and peripherals. In order to minimize expenditures and ensure that agency purposes are met, more technical assistance over the long term must be made available -- possibly through Area Agencies on Aging, state units on aging, and/or through a federal clearinghouse function on technology applications. With the erosion and imminent disappearance of federal revenue sharing funds, agencies will also need guidance on acquisition policies and resources for equipment and software purchase.

State agencies. The Career Information System developed in 1969 by the University of Oregon is now licensed as a statewide system in 17 states. The database is developed by a central state occupational information unit -- sometimes by the state department of labor or education or, in the case of Illinois, the state occupational information coordinating committee (IOICC.) The database is updated at least annually, and can be search by local region. In all states except Illinois, the system requires a combination of printed reference materials and either a needlesort deck or a computer. (On the University of Illinois PLATO system, CIS is entirely screen-based.) The front-end adaptations to CIS which were made as part of this project in order to increase appeal and usefulness to older persons could be more universally adopted by other states. The degree to which states are committed in varying degrees to bringing older persons back into the labor force, preventing premature retirement for those in their late 50's, or promoting career change among dislocated workers. Where unemployment is persistent and high, there is less interest, although moving individuals off general assistance roles or state-supported supplemental SSI payments is a prominent item on the agenda of most state income maintenance agencies.

The project shows that clients at all levels of educational achievement used the career information system and responded positively (although CIS was predominantly used by counselors in work with professional/managerial clients.) The Illinois Business and Employer Profile, which provides information by region and firm size on 100,000 Illinois firms, was used to a lesser extent, and no research data were collected to determine whether clients actually followed leads for "cold calls" obtained from the system. However, the response from Control Data Corporation to project software suggests that one of the most universally marketable components is CIS and the business and employer profile. While interest and skill assessment software is being developed and disseminated, there is rarely any connection to a regularly updated, local database, as in the case of CIS.

State governments have the capacity to market occupational and labor market information systems to local agencies, to conduct statewide user meetings, provide on-going technical assistance, and coordinate multiple state units in delivery of service. The potential for using remote terminals linked to state mainframe systems for delivery of this information is just being explored in agencies as diverse child welfare units and state manpower programs. While use of these terminals has been confined to staff, the potential for supporting service delivery as well as the more widely-accepted MIS functions has yet to be tapped. Labor market information cannot substitute for good job development activities or knowledgeable staff, but fragmentary evidence from this project suggests that it may result in better targetting of job-search objectives, exploration of more alternatives, and possibly earlier acquisition of employment. For those who have been out of the labor market more than 2 years, it may raise confidence by revealing the presence of options and promote rapid vocational maturation. More research is needed, of course, to substantiate these assumptions.

Federal Policies and Initiatives. The project has demonstrated what may perhaps be the most significant federal role in promoting new uses of technology by older persons -- that of support for development. Software *design* as well as *content* are twin elements which must be equally addressed. The purpose of this project was to adapt existing software, which was done. However, most software in this country has been developed on the drill-and-practice model which was (and remains) the most widely accepted design. It is true that adding additional branching to these lessons, creating special "tracks" or menus tailored to user characteristics or plans of study, and removing impediments to lesson use do increase the attractiveness of these lessons. But the project has shown that new software, using programming techniques more familiar to those working with "expert" systems and artificial intellegence, are best suited for teaching complex social skills to older persons with so many pronounced individual differences. New programming languages have very recently been invented which would be directly applicable to this problem.

The reason why more sophisticated programming approaches are so desparately needed for software used by older persons is that for maximum impact, programs *must* make use of older people's experience and previous learning. Programs *must* promote the formulation of different ideas or personal perspectives, not lead the older person in lock-step through one or two prototypical cases in which *the* principle or *a* lesson is to be learned. Sophisticated programming does not mean that the user must be more sophisticated; in fact, the user's experience might even be one of reduced system complexity. Little is known about cognitive learning styles in older adults, but it recognized that older persons do respond best when content builds on previous experience and is highly individualized.

The project also has confirmed that *content* of software must not just be modified but written afresh, in order to respond to the special problems of older persons in the labor market. For example, handling of health-related issues in the job search is one crucial area; fringe benefits is another. Furthermore, the project makes clear that *off-line materials* must be written *jointly* with software applications, in order to insure integration of computer and classroom or counseling content. Any other strategy results in segregation of the computer from main learning or skill development themes being pursued in other program components. *A total framework for project management*, which includes on-line menus, client rosters, and data-gathering utilities together with off-line instruments for structuring projects with a CAI component, needs work beyond that initiated in this project. The federal government has rightfully emphasized its dissemination role for products and ideas, but in the case of technology applications, developmental support at this stage would be more productive.

A second crucial federal role would be professional retraining in order to increase the likelihood of technology diffusion through local agency networks. Training of professionals for computer use has been too focused on "computer literacy" or instructions on how to use specific packages for word processing, accounting, or other administrative applications. Training is needed which will increase the ability of both agency executives, program planners, and direct service staff to use computers for direct services to clients. This project confirms that clients will react enthusiastically and will be assisted in reaching program objectives. Staff at all levels are more conservative than the people they serve. The potential for service to elderly minorities needs emphasis by the federal government, because this may be a new avenue for more successful outreach and assistance to this group.

Retraining should be accompanied by continued federal support for model projects in agencies of different size, client compositions, and auspices. Model projects are essential to diffusion of new ideas, and this is particularly the case with technology applications where "seeing is believing." Efforts to convey process or outcomes of technology projects using printed descriptions are notably uninspiring to skeptical professionals.

Research support is needed for further study of optimal computer configurations in agencies or settings with varying characteristics. The number, type, positioning and availability of computers, together with the quality and quantity of site support needed has never been systematically examined. Many other topics have also been suggested throughout this report.

Funding for Area Agencies on Aging and/or state units on aging should facilitate planning for equipment acquisition by local funded (and non-funded) agencies, with beginning subsidies for formation of local user's groups in direct service. (Again, administrative applications and hardware issues tend to dominate most user group discussions.) Resources should be made available for other private network organizations like OPERATION ABLE, who work with collectivities of organizations which straddle both the employment sector and the aging network.

V. SUMMARY

The most significant study findings were:

- Computer-assisted instruction can be used effectively in social service or voluntary agencies. Applications need not be limited to educational, military, or private sector settings.

- Older workers required minimal orientation to computer-assisted instruction and were almost universally enthusiastic about the experience. This finding applied irrespective of age, educational status, education, sex, or race. However, those with least education tended to avoid computer use -- despite their subsequent positive reaction -- and would require more initial coaching to create confidence.

- Older workers appear to respond as well to non-verbal as verbal methods of counseling and instruction. (The literature suggests that responses to non-verbal instruction might be superior, but this was not tested in the study.)

- Socio-economic and demographic variables were highly important, usually beyond a statistical significance level of .001. This suggests that targetted use of computer-assisted instruction might generate the most cost-effective results.

- Minorities in the project were most heavily concentrated in the 60-69 age group, were predominantly female, likely to see themselves as retired, had experienced longer spells of unemployment, and tended to be less well educated. They were more likely than whites to be receptive to the idea of career change. Despite the relatively greater handicap of advanced age, lesser education, and lengthier unemployment, minorities were as likely as whites to have found employment 30 days post-training.

- Controlling for race, minorities who found employment used computer-assisted instruction more than did unsuccessful minority job-seekers.

- All successful job-seekers in the project were more likely to have used CAI; only 4.4% did not, compared to 6.2% of those still actively seeking work and 9.1% of persons out of the labor market after 30 days.

- When a small quasi-experiment was performed in which 32 clients received classroom training only were compared to 33 persons receiving classroom and CAI training, the CAI group did nearly as well as the non-CAI group in successful job-seeking. These results were interpreted positively, because the CAI group suffered from more handicapping conditions than the non-CAI group.

- The project demonstrated that persons age 60 or over who see themselves as retired are as likely as individuals with stronger labor force commitment to seek jobs successfully. This result among retired persons appears to be associated with CAI use. The potential for increasing labor supply among this group using CAI seems promising.

- Women who successfully found work were likely to have used CAI more than unemployed women in the project 30 days post-training. These effects were observed across all programs at the three research sites. The majority (80%) of females in the study sample were Black, and most were aged 60 or over. This finding suggests that CAI may prove to be an unexpectedly powerful tool for enhancing the employment potential of minority elderly.

- Significant differences were observed in patterns of lesson usage on the computer by race, sex, education, age, and retirement status. Some of these differences were directly attributable to "menus" for white collar and blue collar workers developed as part of project curriculum design. However, it appeared that minorities and those least well-educated were less frequently given lessons on career information and labor market information. These groups were more likely to receive no CAI at all. Whether these outcomes were a result of staff selection, self-selection, or other factors is not known, but warrants further study.

- While adaptation of existing software increased its suitability for the older population, development of new applications using programming languages for "expert systems" is a vital next step. Drill and practice is not an effective method for teaching skills or knowledge, especially among the older population for whom their own previous experience is such a salient factor in new learning.

- Private sector marketing and dissemination of software application for the older worker is a longer-term challenge. Firms will have to be given data supporting potential demand and helped to reconceptualize market segments outside the educational community.

IV. BIBLIOGRAPHY

Allen, J.R. Current trends in computer-assisted instruction. *Computers in the Humanities*, 1972, *7*, 47-55.

Belbin, E., and Belvin, M. *Problems in adult retraining*. London, England: William Heineman Ltd., 1972.

Bitzer, D. L. and Alpert, D. Advances in computer-based education. *Science*, 1970, *167*, 1582-1590.

Carbonell, J.R., Elkind, J. I., and Nickerson, R. S. On the psychological importance of time in a time-sharing system. *Human Factors*, 1968, *10*(2), 135-142.

Clyde, J. *Computerized career information and guidance systems*. Columbus, Ohio: Ohio State University, National Center for Research in Vocational Education, 1979.

Coulson, J. E., Estavano, D. P., Melaragno, R. J., and Silberman, H. F. Effects of branching in computer-controlled autoinstructional devices. *Journal of Applied Psychology*, 1970, *54*, 384-392.

Dence, M. Toward defining the role of CAI: a review. *Educational Technology*, 1980, *XX*(11), 50-54.

Eldridge, J. M., and Smith, J. D. *Traditional versus computer-based vocational guidance and counseling systems: implications for disadvantaged youth*. Columbus, Ohio: Ohio State University, 1972.

Flynn, M. L. Computer-based instruction in social policy: a one-year trial. *Journal of Education for Social Work*, 1977, *13*(1), 52-59.

Flynn, M. L. and DiBello, L. V. *Evaluating an automated career information system: research results and techniques for system assessment*. Paper presented at the annual meeting of the American Vocational Association, St. Louis, Missouri, 1982.

Flynn, M. L. DiBello, L. V., and Knight, M. *The PLATO career information system at Truman College: summary of preliminary experience*. Urbana, Illinois: School of Social Work, University of Illinois at Urbana-Champaign, 1982.

Flynn, M. L., DiBello, L. V., and Patchner, L. *The Illinois CETA/PLATO linage project: automated support for participant orientation, job-seeking skills, and interagency coordination*. Urbana, Illinois: School of Social Work, University of Illinois at Urbana-Champaign, 1981.

Grinstein, L. S. and Yarmish, R. J. The computer in education: math and reality. *Educational Horizons*, 1981, *59*, 158-164.

Hallworth, H. J. and Brebner, A. *Computer-assisted instruction in the schools*. Edmonton: Alberta Education, Planning, and Research, 1980.

Harris, J. The computer: guidance tool of the future. *Journal of Counseling Psychology*, 1974, *21*, 331-339.

Harris-Bowlesby, J., Rayman, J. R., and Bryson, D. L. *DISCOVER: a computer-based career guidance and counselor administrative support system.* Field Trial Report. Westminister, Maryland: DISCOVER Foundation, Inc., 1976.

Kearsley, G. P. and Hillelsohn, M. J. Human factors considerations for computer-based training. *Journal of Computer-Based Instruction*,1982, *8*(4), 74-84.

Knight, M., DiBello, L. V., and Flynn, M. L. *The PLATO career information system at the Champaign Consortium: summary of preliminary experience*. Urbana, Illinois: School of Social Work, University of Illinois at Urbana-Champaign, 1982.

Lautsch, J. C. Computers and education: the genie is out of the bottle. *Technical Horizons in Education*, 1981, *8*, 34-35; 39.

Lewellen, L. Computers in the classroom. *Journal of Educational Data Processing*, 1971, *8*, 33-38.

Lindeman, R., et al. *The educational and career exploration system - first year report of a county-wide field trial and evaluation*. Paper presented at the annual meeting of the American Educational Research Association, 1972. (ED 065 704)

Mathis, A., Smith, T. and Hansen, D. College student's attitudes toward computer-assisted instruction. *Journal of Educational Psychology,* 1978, *61*, 46-51.

McKinlay, B., and Adams, D. *Information access system as used at Churchill high school - a project report*. Eugene, Oregon: University of Oregon, 1971.

McKinlay, B., and Franklin, P. *Education components for a career information system*. Eugene, Oregon: University of Oregon, 1975.

Meyer, L. A., Ory, J. C., and Hinkley, R. C. *Evaluation research in basic skills with incarcerated adults.* Unpublished report. Urbana, Illinois: Computer-based Education Research Laboratory, University of Illinois at Urbana-Champaign, 1983.

Molnar, A. R. Computer innovations in education. Washington, D.C.: National Science Foundation, 1972.

Murphy, R. T. and Appel, L. R. Evaluation of the PLATO IV computer-based education system in the community college. Final report. Princeton, New Jersey: Education Testing Service, 1977.

Neale, J. G., Toye, M. H., and Belgin, E. Adult training: the use of programmed institution. Occupational Psychology, 1968, XI(3), 43-48.

Osin, L. B. Computer-assisted instruction in arithmetic in Israeli disadvantaged elementary schools. Unpublished manuscript. Ramat Aviv, Israel: Department of Computers in Instruction, Centre for Educational Technology, 1980.

Parnes, H. S. et al. The pre-retirement years. Ohio: Center for Human Resources Research, The Ohio State University, 1974.

Patchner, L., and Flynn, M. L. Improving the job-seeking skills of CETA participants through computer-based instruction. Champaign, Illinois: Champaign CETA Consortium, 1980.

Pinney, G. W. Studies don't confirm claims for PLATO's teaching success. Minneapolis Tribune, August 22, 1982, CXVI(20), 10-12.

Rayman, J., et al. Field trial of DISCOVER: a new computerized interactive guidance system. Vocational Guidance Quarterly, 1978, 26, 349-359.

Reardan, R., et al. Self-directed career exploration: a comparison of CHOICES and the self-directed search. Journal of Vocational Behavior, 1982, 20, 22-30.

Saracho, O.N. The effects of a computer-assisted instruction program on basic skills achievement and attitudes toward instruction of Spanish-speaking migrant children. American Educational Research Journal, 1982, 19, 201-219.

Sheppard, H. L. Research and development strategy on employment-related problems of older workers. Final Report. Washington, D.C.: American Institutes for Research, 1978.

Siegel, M. A. Computer-based education in prison schools. Journal of Educational Technology Systems, 1978-79, 7, 239-256.

Siegel, M. A. and DiBello, L. V. PLATO computer-based education for the Job Corps. Urbana, Illinois: Computer-based Education Research Laboratory, University of Illinois at Urbana-Champaign, 1980.

Stallings, J. A. Allocated academic learning time revisited, or beyond time on task. Paper presented at the annual meeting of the American Educational Research Association, Boston, Massachusetts, 1980.

Steward, C. V. How should schools use computers? Popular Computing, 1981, V, 104; 106; 108.

Thomas, D. B. The effectiveness of computer-assisted instruction in secondary schools. Association for Educational Data Systems Journal, 1979, 12(3), 103-116.

Tsai, S. and Pohl, N. F. Student achievement in computer programming: lecture versus computer-aided instruction. Journal of Experimental Education, 1978, 46(2), 66-70.

Thorkildson, R. N. Microcomputer/videodisc authoring system for instructional programming. Paper presented at the annual meeting of the American Educational Research Association, New York, New York, 1982.

Watson, F. G. Research on teaching science. In N. L. Gage (Ed.), Handbook of Research on Teaching. Chicago, Illinois: Rand McNally, 1963.

Wells, H., et al. Automated instructional development system: validation study. Alexandria, Virginia: Human Resources Research Organization, March 1978.

Wells, R. F., et al. Effectiveness of three visual medial and two study formats in teaching concepts involving time, space, and motion. Audio Visual Communication Review, 1973, 21, 121-136.

APPENDIX 1

DATA COLLECTION INSTRUMENTS

- Initial Assessment Form
- Follow-up Form
- Daily PLATO log-off-line
- Example of automated data collection

NPA/OI/ABLE PROJECT INITIAL CLIENT ASSESSMENT FORM

Client #_____	(1-5)
Record #___	(6)
Card 1	(7)
Site 02	(8-9)
Program 03	(10-11
Prog. Comp._____	(12-14

Training Start Date ☐☐ Mo. ☐☐ Day ☐☐ Yr. (15-20

Race 1 - White 4 - Hispanic (21)
2 - Black 5 - Other
3 - Asian 9 - Missing

Sex 1 - Male 2 - Female 9 Missing data (22)

Age ☐☐ (Code 99 if data are missing) (23-24)

Marital Status (Code 99 for all). (25)

Highest level of education completed: (26-27)

01 - Some grade school
02 - Grade School Gradute
03 - Some High School
04 - High School Graduate
05 - Some college
06 - Assoc. Arts/Science Degree
07 College Graduate
08 Master's Degree
11 Ph.D.

How did client learn about the Waxter Center program? (28)

1 - Through other programs of the Center
2 - Through the NPA
3 - From other agencies
5 - media
6 - friend, relative
7 - other

About how many years, in total, did the client spend working full-time or part-time?)29-31)

☐☐

Does client consider himself/herself retired now? (32)

1 - Yes
2 - No
3 - Missing data

During the last 5 years, has the client ever been unemployed? (33)

1 - Yes
2 - No
3 - Missing data

(If yes), How many periods of unemployment did the client have over the past five years? (34)

1 - one
2 - two
3 - three
4 - four
5 - five or more
7 - Not applicable

Was the client working at the time of registration at the NPA employment program at Waxter Center? (35)

1 - Yes, full time, permanent
2 - Yes, full time, temporary
3 - Yes, part-time permanent
4. Yes, part-time, temporary
5 - No
9 - Missing data

If not working at the time of registration, how long had the client been out of work? (36)

1 - less than 1 month
2 - one-two months
3 - three-five months
4 - six-seven months
5 - one-two years
6 - three-five years
7 - over five years
8 - not applicable - is working

What type of employment was the client seeking at the time of registration? (37)

1 - full-time, permanent
2 - full-time, temporary
3 - part-time, temporary
4 - part-time, permanent
5 - any of the above
9 missing data

Initial assessment form

Which of the following categories would best summarize the client's most typical previous job experience?

1 - sales

2 - professional/managerial/technical

3 - clerical

4 - trades

5 - service

6 - other

NPA/UI/ABLE PROJECT FOLLOW-UP INTERVIEW FORM

Client #_____ (1-5)
Record #_____ (6)
Card # _____ (7)

1. Did you attend the (PROGRAM TITLE) for both weeks, one week, or less than one week?

3 - both weeks 2 - one week 1 - less than one week (8)

9 - missing data

2. Have you had any luck in finding a job since you were last in contact with (PROGRAM TITLE)?

1 - Yes 2 - No (9)

3. Have you had any job offers which you did not accept? (10)

1 - Yes 2 - No

4. How many job interviews have you had since you last attended the (PROGRAM TITLE)? (11 - 12)

____

____

5. Approximately how many calls have you made to employers requesting interviews since you last attended (PROGRAM TITLE)? (13-14)

____

____

6. Which of the following problems would you say have affected you in seeking a job?

		Yes	No	N/A	
A.	Age discrimination	1	2	7	(15)
B.	Sex discrimination	1	2	7	(16)
C.	Race discrimination	1	2	7	(17)
D.	Tight job market, oversupply of persons in your field	1	2	7	(18)
E.	Lack of confidence, low morale, feeling discouraged	1	2	7	(19)
F.	Family responsibilities, illness	1	2	7	(20)
G.	Uncertainty about how to search for a job	1	2	7	(21)
H.	Other	1	2	7	(22)

7. Since you attended (PROGRAM TITLE), have you made any changes in the way you try to present yourself to employers? (Let me give you some examples: revising your resume; writing a cover letter for your resume in a different way; talking about yourself more positively in job interviews; reviewing your skills and strengths more effectively.) (23)

1 - Yes 2 - No

8. If yes, please tell me a little about what you've done to present yourself in new ways to employers.

9. If you've made no change in the way you present yourself, why not?

10. Since you attended (PROGRAM TITLE), have your tried using any new sources of information in looking for jobs? (Let me give you some examples: reading different newspapers or journals for leads; using the library; asking friends for leads; checking the business section of the paper, in addition to the want ads.) (24)

1 - Yes 2 - No

11. If yes, please tell me a little about what new information sources you've used.

12. If you haven't used any new information sources, why not?

13. Since you attended (PROGRAM TITLE), have you tried any new ways to widen your search for a job? (Let me give you some examples of why I mean: looking in a wider geographic area; looking for jobs in different types of companies; looking for different types of jobs than you have done before; making calls to employers who haven't advertised positions.) (25)

1 - yes 2 - No

14. If yes, can you tell me what new techniques or approaches you have used?

15. If you haven't tried any new ways to widen you search for a job, why not?

16. (TO BE ASKED ONLY OF PERSONS WHO ATTENDED PART, BUT NOT ALL OF THE PROGRAM). Could you tell me why you attended only part of the sessions for (PROGRAM TITLE)?

FOR PERSONS WHO HAVE NOT FOUND EMPLOYMENT SINCE LAST CONTACT WITH THE NPA/WAXTER CENTER PROGRAM

17. You mentioned that you haven't found employment since you last attended (PROGRAM TITLE). Do you feel you have any highly promising job leads at the moment? (26)

1 - Yes 2 - No (If no, skip to Q. 23)

18. What would be the job title of your most promising lead?

____________________________________ (27-28)

19. Do you think the (PROGRAM TITLE) helped you identify this lead by helping you improve your skills?

1 - Yes 2 - No (27)

20. (If yes). Can you tell me how you think the (PROGRAM TITLE) helped you get this job lead?

21. (If no). What seemed to have helped you most in getting this job lead?

22. How does the salary/wage of this job lead compare with your income from your last place of employment? Is it: (28)

4 - Noticeably more
3 - Slightly more
2 - Slightly less
1 - Noticeably less

23. (For persons who have no promising job leads.) I'm sorry to hear that. I know that it is tough finding a job. What sort of difficulties have you encountered?

24. (For all) Are you planning to coninue your job search? (29)

1 - Yes 2 - No

Thank you very much for your help. I appreciate your time and interest.

FOR PERSONS WHO HAVE WORKED AT SOME TIME SINCE LAST CONTACT WITH THE NPA/ WAXTER CENTER PROGRAM

Now I'd like to ask just a few more questions about the nature of your employment since you participated in (PROGRAM TITLE).

25. You said you had found employment since you attended (PROGRAM TITLE). Are you still working? (30)

1 - Yes 2 - No

26. Would you tell me what is/was the title of your job?

27. (Interviewer should identify which of the following categories best fits this job:) (31)

1 - sales
2 - professional/managerial/technical
3 - clerical
4 - trades
5 - service
6 - other

28. Is/was your job (32)

4 - full-time, permanent
3 - part- time, permanent
2 - part-time, temporary
1 - part-time, permanent

29. How satisfied are/were you with you new job? (33)

5 - very satisfied
4 - moderately satisfied
3 - satisfied
2 - dissatisfied
1 - very dissatisfied

30. If satisfied, what would you say is/was the main reason for your satisfaction?

31. If dissatisfied, what would you say is the main reason for your dissatisfaction?

Follow-up for persons at work

32. How does this salary/wage compare with your income from your last place of employment? Are/were you earning: (34)

4 - noticeably more
3 - slightly more
2 - slightly less
1 - noticeably less

33. Which of the following most helped you to obtain this job? (Include as many as apply to this particular job.)

		Yes	No	N/A	
A.	(NAME OF MAJOR LOCAL PAPER)	1	2	7	(35)
B.	Other local paper	1	2	7	(36)
C.	Direct application to employer	1	2	7	(37)
D.	Friend/relative	1	2	7	(38)
E.	Temporary service agency	1	2	7	(39)
F.	Regular employment agency	1	2	7	(40)
G.	Became self-employed	1	2	7	(41)
H.	Former employer	1	2	7	(42)
I.	Waxter Center or NPA	1	2	7	(43)
J.	Professional/trade newsletters	1	2	7	(44)
K.	Contacting friends, relatives, co-workers about jobs they might know	1	2	7	(45)
L.	Networking: contracting persons suggested by friends, relatives, and co-workers	1	2	7	(46)
M.	Cold calls to employers	1	2	7	(47)

Thank you very much for helping us today. I greatly appreciate your time.

PLATO Daily Log

Today's Date____________

Comment on System OK SLOW DOWN

USER NAME	PLATO PROGRAM USED	SCREEN & KEYSET EASY TO USE?	INSTRUCTIONS CLEAR?	PROGRAM USEFUL?			HOW FAR IN LESSON?			COMMENTS
		Very Easy Very Hard 1 2 3 4 5	Very Clear Very Un-Clear 1 2 3 4 5	Very	Somewhat	Not really	Finish	Partial	Just looked	

EXAMPLE OF AUTOMATED LOG FOR DATA COLLECTION ON LESSON USAGE BY CLIENT AT THE THREE RESEARCH SITES*

Record usage for group waxter as of 08/17/84:

		Last On	Days	Hours	Sess.	CPU
annie	s	08/10/84	8	14.6	16	0.6
bernie	i					
brian	s	07/17/84	6	0.6	14	4.2
	s	08/16/84	10	11.6	17	0.8
callie	i	08/16/84	21	9.1	67	1.2
calvin	i	07/17/84	1	0.9	3	0.9
carl	i	07/17/84	1	0.6	2	2.2
catherine	s					
chester	s	08/10/84	8	6.9	15	0.7
clarence	s					
claude	s	07/25/84	3	1.5	3	0.7
delfield	s	07/26/84	4	4.2	6	0.5
dibello	i	07/18/84	2	0.3	9	5.1
dorothy	s	07/17/84	2	3.1	4	0.8
dorothy	i	08/09/84	3	2.6	6	0.3
dorothy	s	08/10/84	9	11.0	12	0.7
dwight	i					
edith	s	07/19/84	1	1.9	1	0.2
edna	s	08/16/84	4	6.4	6	0.4
edward	s	07/26/84	7	6.2	9	0.4
emma	s	08/10/84	8	11.3	10	0.6
ernest	s					
esther	s	08/14/84	7	5.4	12	0.8
esther	i	08/14/84	12	8.8	27	0.5
ethel	s	07/27/84	3	2.4	4	0.2

*Last names deleted to preserve confidentiality.

BEST COPY AVAILABLE

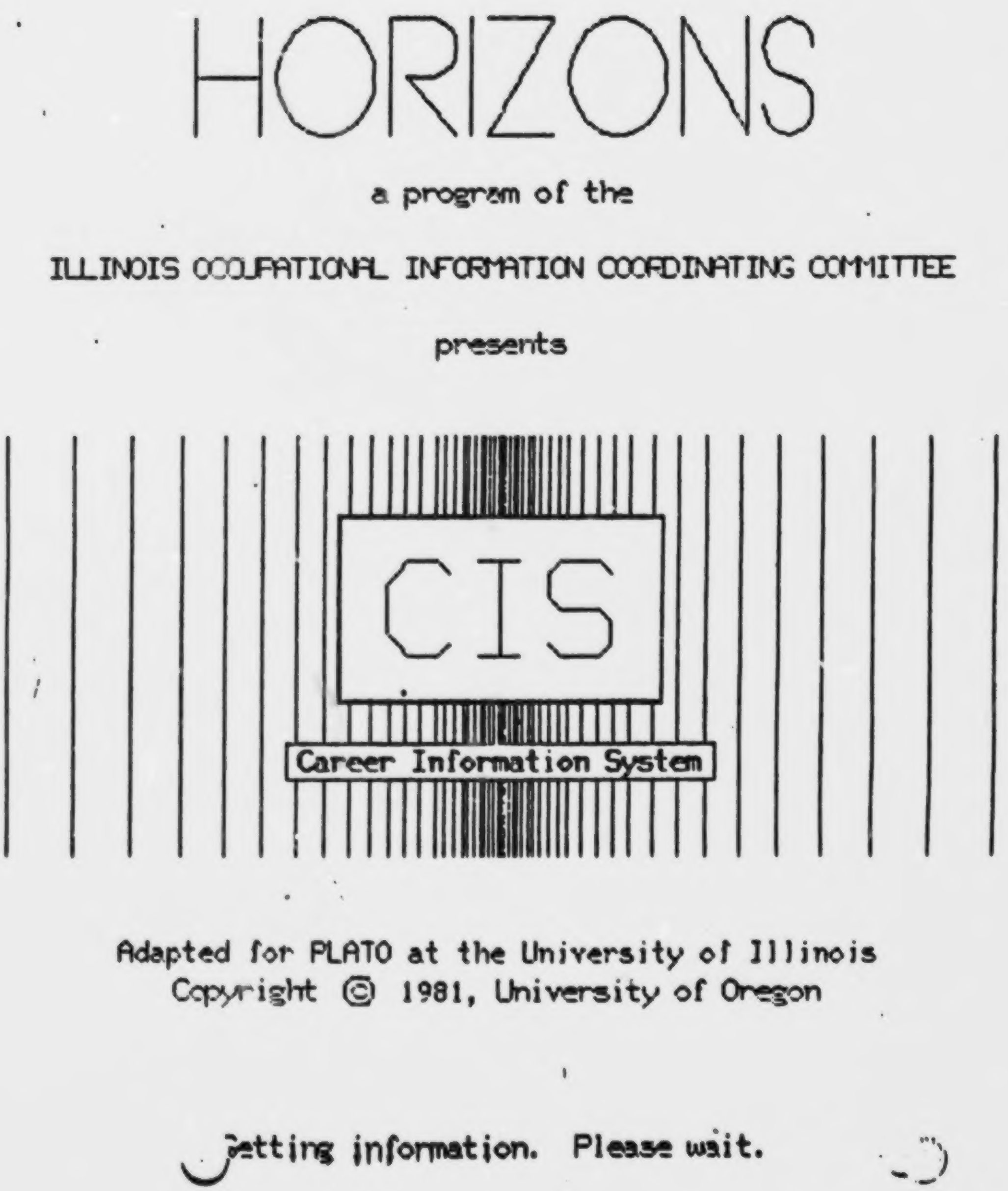
APPENDIX 2

PLATO CAREER INFORMATION SYSTEM AND THE ILLINOIS BUSINESS AND INDUSTRY PROFILES: SELECTED SCREEN COPIES

SELECTED SCREEN COPIES:

PLATO CAREER INFORMATION SYSTEM

(1)



HORIZONS

a program of the

ILLINOIS OCCUPATIONAL INFORMATION COORDINATING COMMITTEE

presents

CIS

Career Information System

Adapted for PLATO at the University of Illinois

Copyright © 1981, University of Oregon

Getting information. Please wait.

(1)

GENERAL INDEX TO CIS

h. How to get around in CIS

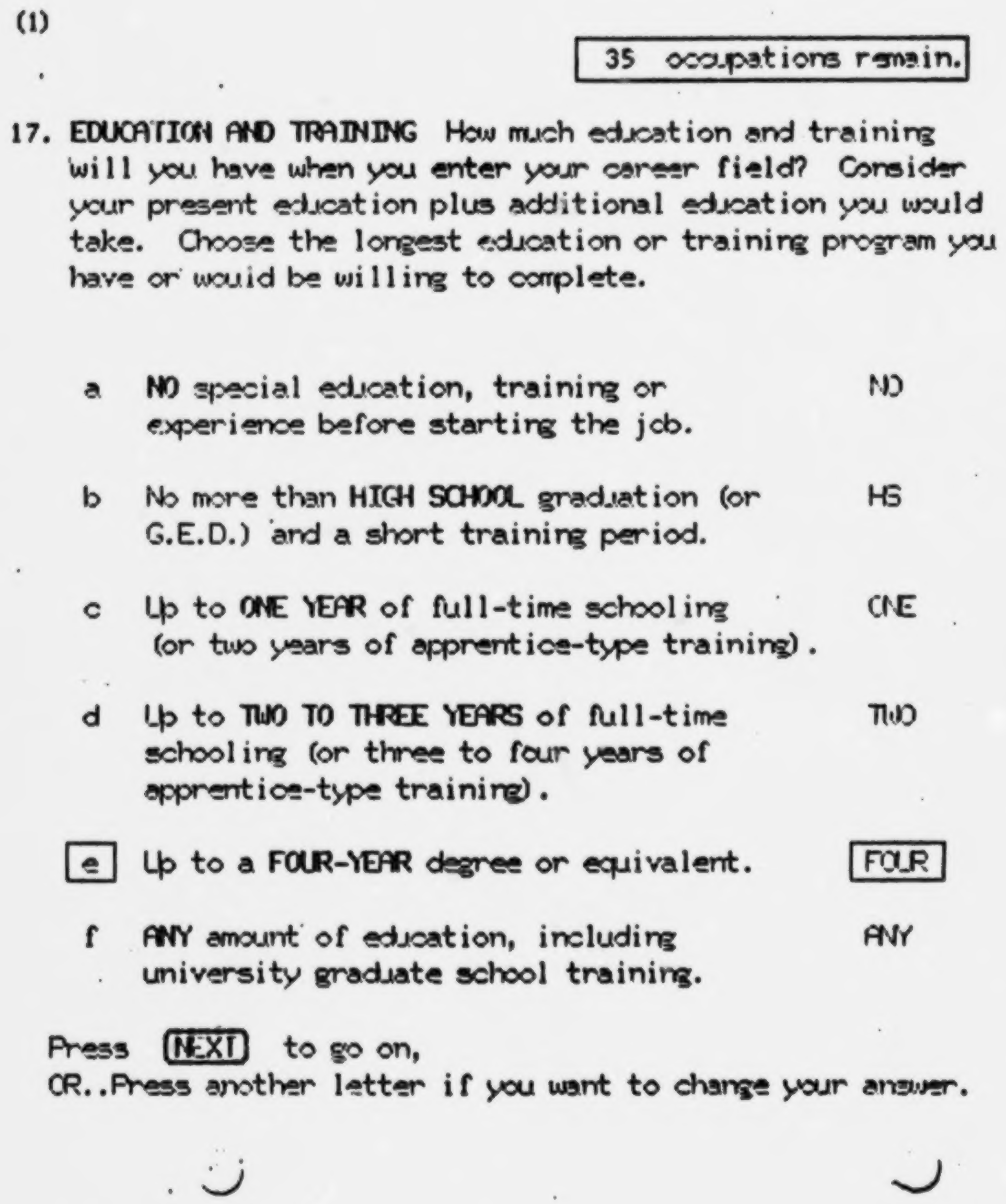
c. What you can learn from CIS

q. Questions to help you choose an occupation

INFORMATION ON:

- o. Occupations
- p. Programs of Study
- s. Schools

Press the letter of the section you would like to see.



(1)

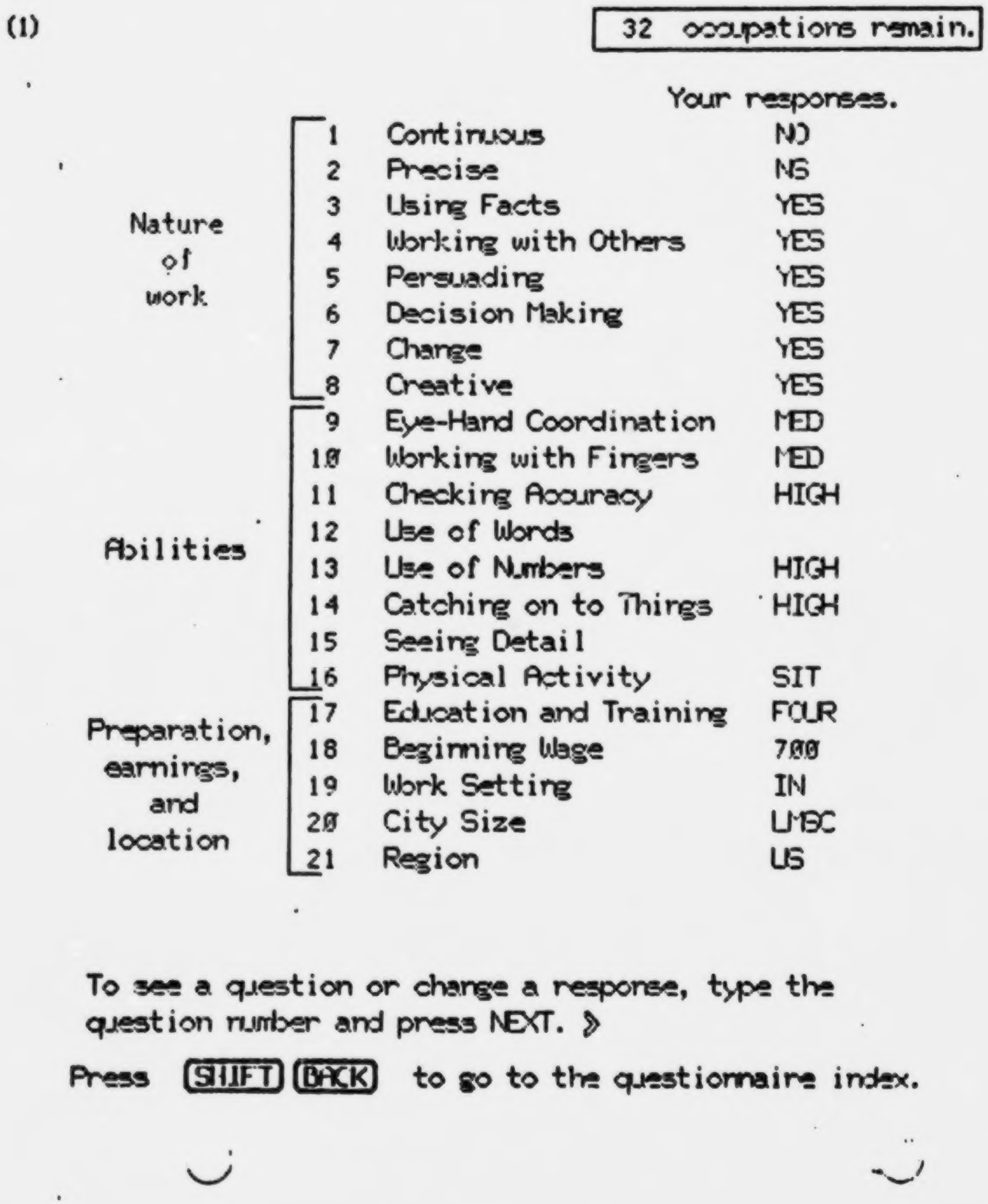
35 occupations remain.

17. **EDUCATION AND TRAINING** How much education and training will you have when you enter your career field? Consider your present education plus additional education you would take. Choose the longest education or training program you have or would be willing to complete.

a	**NO** special education, training or experience before starting the job.	NO
b	No more than **HIGH SCHOOL** graduation (or G.E.D.) and a short training period.	HS
c	Up to **ONE YEAR** of full-time schooling (or two years of apprentice-type training).	ONE
d	Up to **TWO TO THREE YEARS** of full-time schooling (or three to four years of apprentice-type training).	TWO
[✓ e]	Up to a **FOUR-YEAR** degree or equivalent.	[✓ FOUR]
f	**ANY** amount of education, including university graduate school training.	ANY

Press NEXT to go on,
OR..Press another letter if you want to change your answer.

(1)

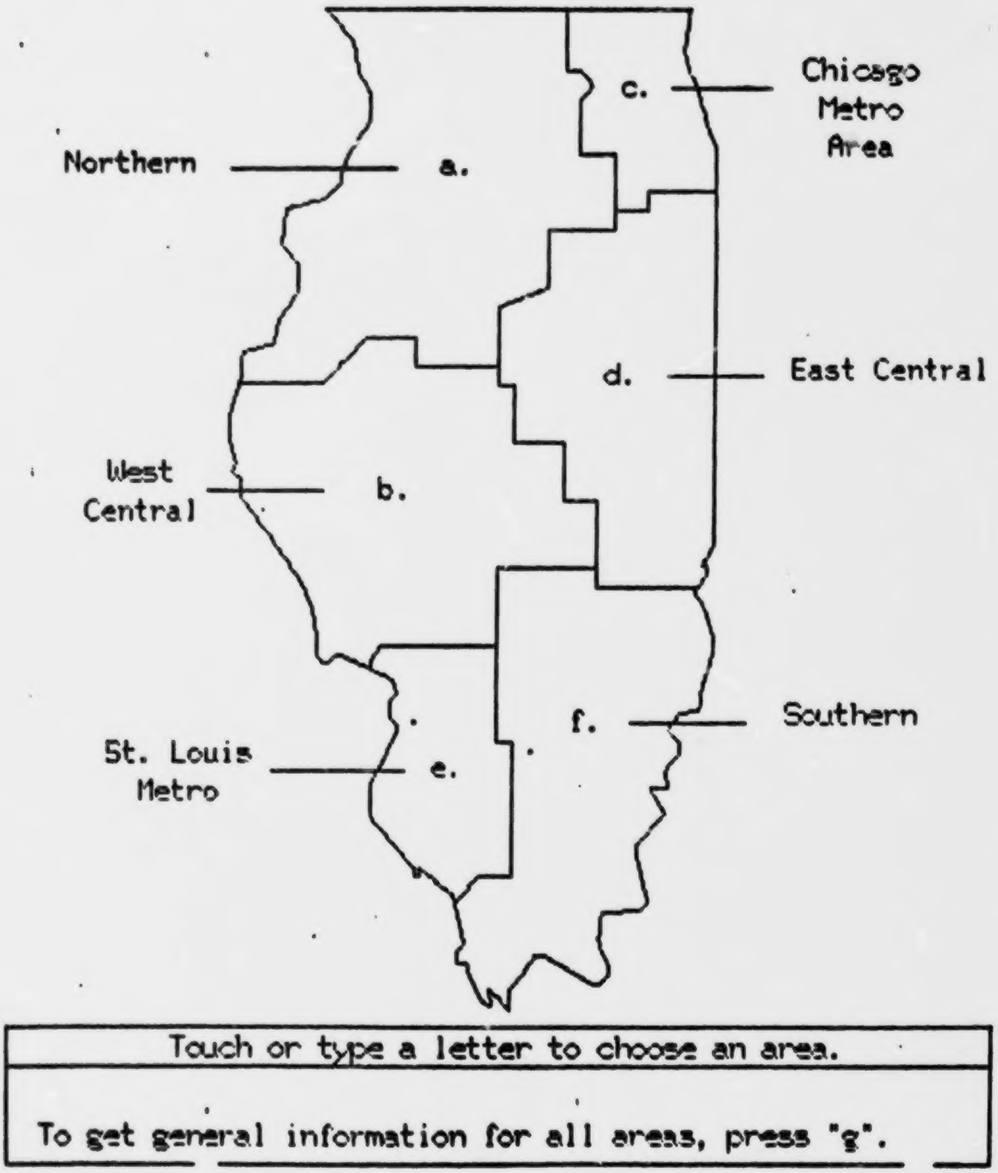


32 occupations remain.

			Your responses.
Nature of work	1	Continuous	NO
	2	Precise	NO
	3	Using Facts	YES
	4	Working with Others	YES
	5	Persuading	YES
	6	Decision Making	YES
	7	Change	YES
	8	Creative	YES
Abilities	9	Eye-Hand Coordination	MED
	10	Working with Fingers	MED
	11	Checking Accuracy	HIGH
	12	Use of Words	
	13	Use of Numbers	HIGH
	14	Catching on to Things	HIGH
	15	Seeing Detail	
	16	Physical Activity	SIT
Preparation, earnings, and location	17	Education and Training	FOUR
	18	Beginning Wage	700
	19	Work Setting	IN
	20	City Size	LMSC
	21	Region	US

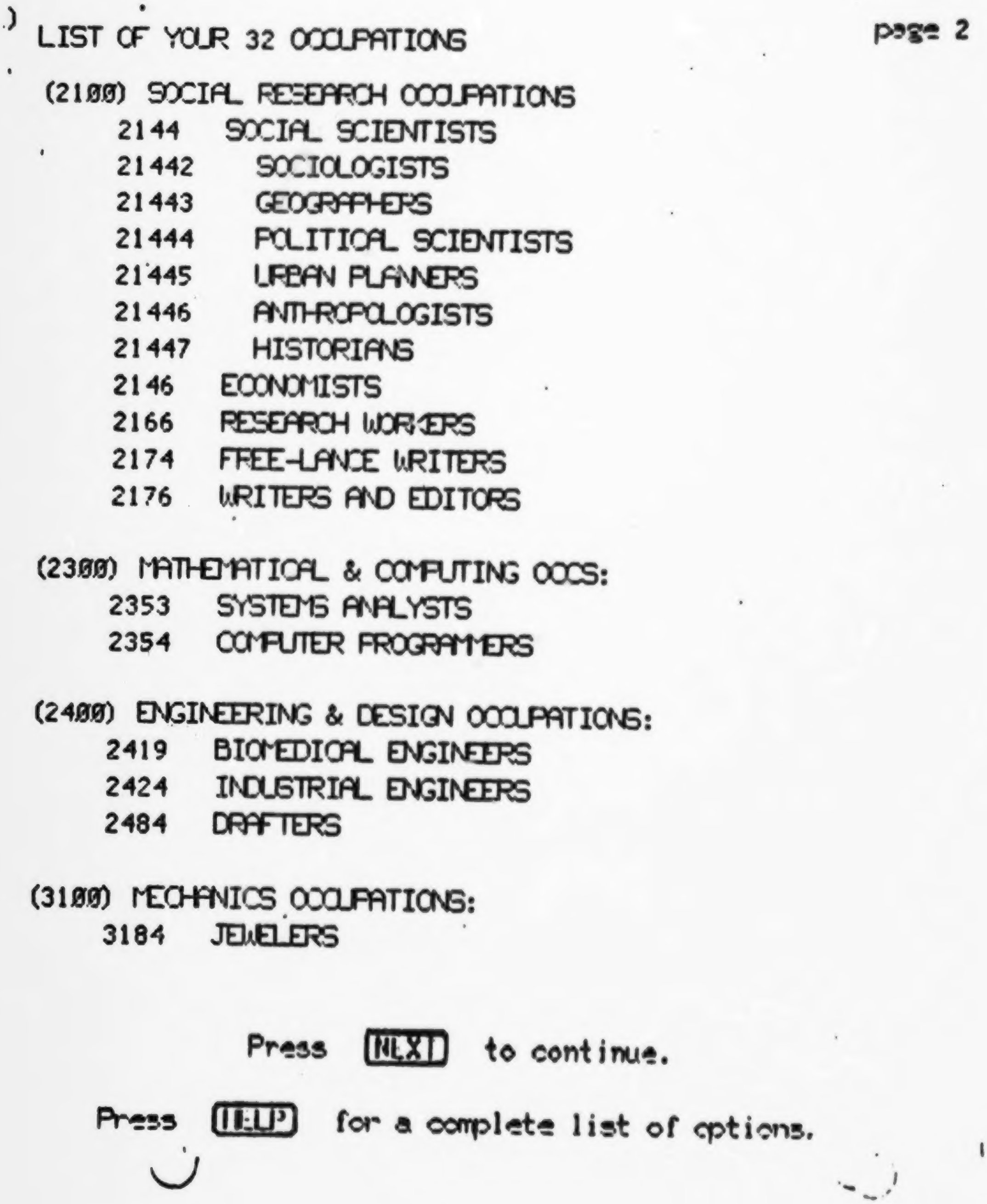
To see a question or change a response, type the question number and press NEXT. »

Press SHIFT BACK to go to the questionnaire index.


Chicago Metro Area
c.
Northern
a.
d.
East Central
West Central
b.
f.
Southern
St. Louis Metro
e.

Touch or type a letter to choose an area.

To get general information for all areas, press "g".



```
LIST OF YOUR 32 OCCUPATIONS                                   page 2
 (2100) SOCIAL RESEARCH OCCUPATIONS
      2144   SOCIAL SCIENTISTS
      21442    SOCIOLOGISTS
      21443    GEOGRAPHERS
      21444    POLITICAL SCIENTISTS
      21445    URBAN PLANNERS
      21446    ANTHROPOLOGISTS
      21447    HISTORIANS
      2146   ECONOMISTS
      2166   RESEARCH WORKERS
      2174   FREE-LANCE WRITERS
      2176   WRITERS AND EDITORS

 (2300) MATHEMATICAL & COMPUTING OCCS:
      2353   SYSTEMS ANALYSTS
      2354   COMPUTER PROGRAMMERS

 (2400) ENGINEERING & DESIGN OCCUPATIONS:
      2419   BIOMEDICAL ENGINEERS
      2424   INDUSTRIAL ENGINEERS
      2484   DRAFTERS

 (3100) MECHANICS OCCUPATIONS:
      3184   JEWELERS

               Press  NEXT  to continue.

         Press  HELP  for a complete list of options.
```

1)

SOCIAL WORKERS (# 8417)

(Region: Other)

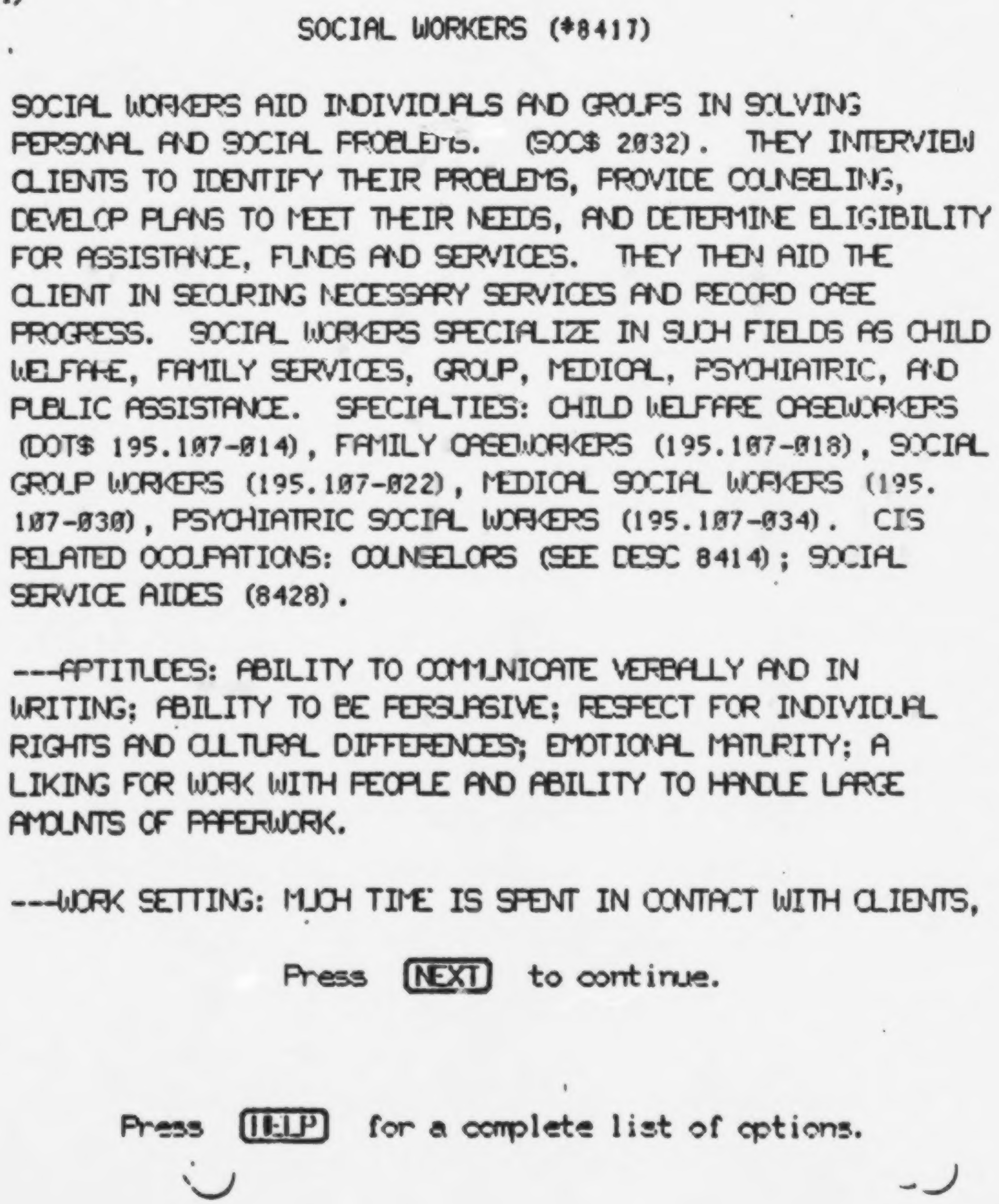
Press:	To see:
a	Information about this occupation. (description, work setting, wages, outlook)
b	Education and training you will need. (skills, related educational programs, tips)
c	Where to get more information.
d	Information on individual employers for this occupation.

Press the letter of the information you would like to see.

Press [SHIFT] [LAB] to print this occupation, or
[SHIFT] [DATA] to choose a different region.

Press [BACK] to return.

(1)



SOCIAL WORKERS (#8417)

SOCIAL WORKERS AID INDIVIDUALS AND GROUPS IN SOLVING PERSONAL AND SOCIAL PROBLEMS. (SOC$ 2032). THEY INTERVIEW CLIENTS TO IDENTIFY THEIR PROBLEMS, PROVIDE COUNSELING, DEVELOP PLANS TO MEET THEIR NEEDS, AND DETERMINE ELIGIBILITY FOR ASSISTANCE, FUNDS AND SERVICES. THEY THEN AID THE CLIENT IN SECURING NECESSARY SERVICES AND RECORD CASE PROGRESS. SOCIAL WORKERS SPECIALIZE IN SUCH FIELDS AS CHILD WELFARE, FAMILY SERVICES, GROUP, MEDICAL, PSYCHIATRIC, AND PUBLIC ASSISTANCE. SPECIALTIES: CHILD WELFARE CASEWORKERS (DOT$ 195.107-014), FAMILY CASEWORKERS (195.107-018), SOCIAL GROUP WORKERS (195.107-022), MEDICAL SOCIAL WORKERS (195.107-030), PSYCHIATRIC SOCIAL WORKERS (195.107-034). CIS RELATED OCCUPATIONS: COUNSELORS (SEE DESC 8414); SOCIAL SERVICE AIDES (8428).

---APTITUDES: ABILITY TO COMMUNICATE VERBALLY AND IN WRITING; ABILITY TO BE PERSUASIVE; RESPECT FOR INDIVIDUAL RIGHTS AND CULTURAL DIFFERENCES; EMOTIONAL MATURITY; A LIKING FOR WORK WITH PEOPLE AND ABILITY TO HANDLE LARGE AMOUNTS OF PAPERWORK.

---WORK SETTING: MUCH TIME IS SPENT IN CONTACT WITH CLIENTS,

Press NEXT to continue.

Press HELP for a complete list of options.

BEST COPY AVAILABLE

```
      Here are the Top Ten industries for your occupation:
       The BEST hiring potential is in the FIRST industry.


Number

   0.  Social Services
   1.  Civic, Social, and Fraternal Associations
   2.  Individual and Family Social Services
   3.  Social Services
   4.  Child Day Care Services
   5.  Public Finance, Taxation, and Monetary Policy
   6.  Job Training and Vocational Rehabilitation Services
   7.  Membership Organizations
   8.  Business Associations
   9.  Justice, Public Order, and Safety


         Press the number of the industry you want.

        Press LAB to choose a code not on this list.
```

APPENDIX II

PLATO CAREER INFORMATION SYSTEM AND THE ILLINOIS BUSINESS AND INDUSTRY PROFILES: SELECTED SCREEN COPIES

SCREEN COPIES:
FRONT-END MODIFICATIONS TO THE
CAREER INFORMATION SYSTEM
Sample Screen Displays

1

CIS INFORMATION INDEX

1. **OCCUPATIONS**
   by Job Family Clusters

2. **PROGRAMS**
   of Preparation and Study

3. **SCHOOLS**
   (Illinois and National)

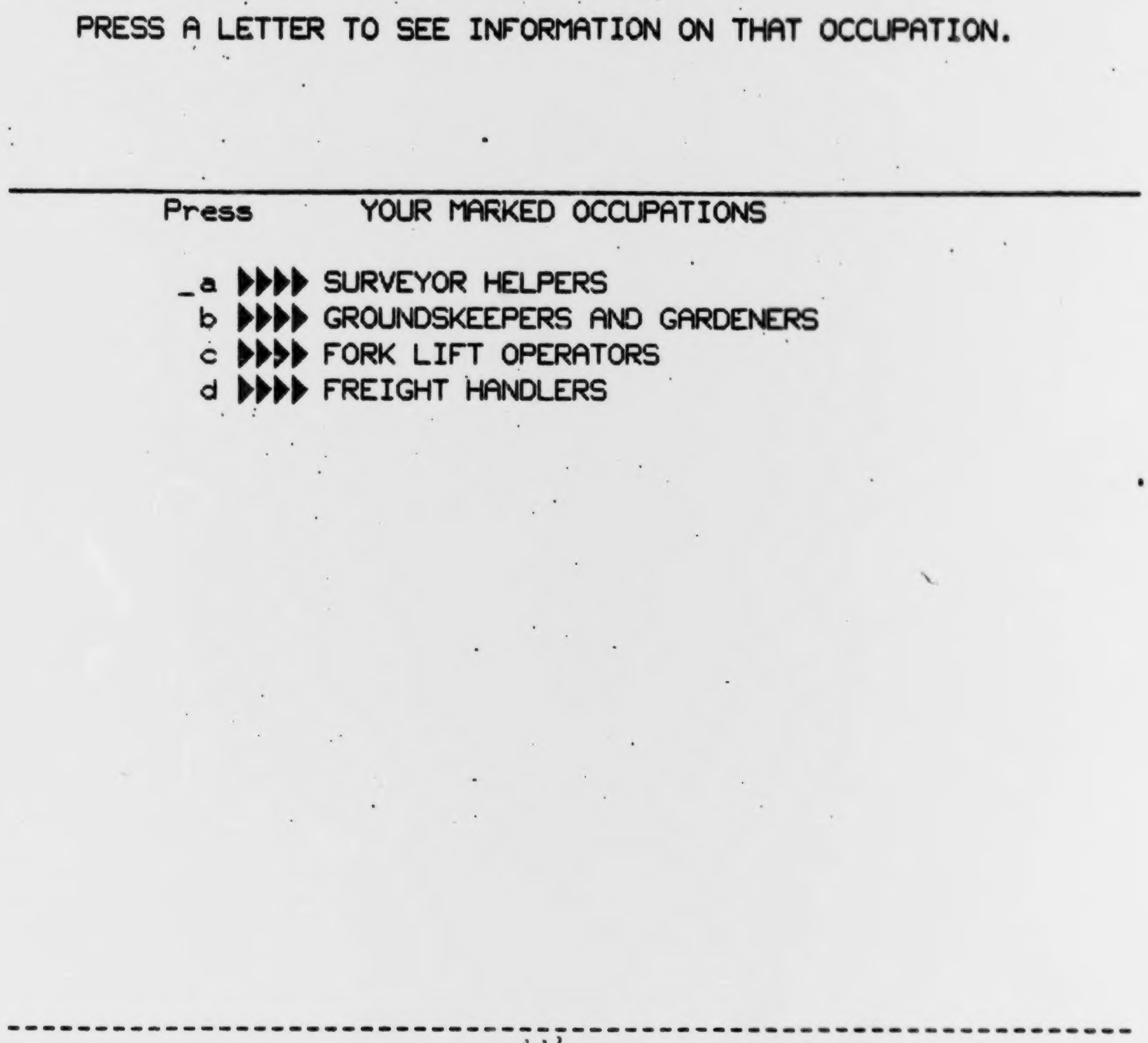
Press the number of the section you would like to see.

GENERAL INDEX TO CIS

1. **QUESTIONS**
   to help you choose an occupation.
   (QUEST)

2. **INFORMATION**
   on occupations, programs, and schools.

Press the number of the section you would like to see.

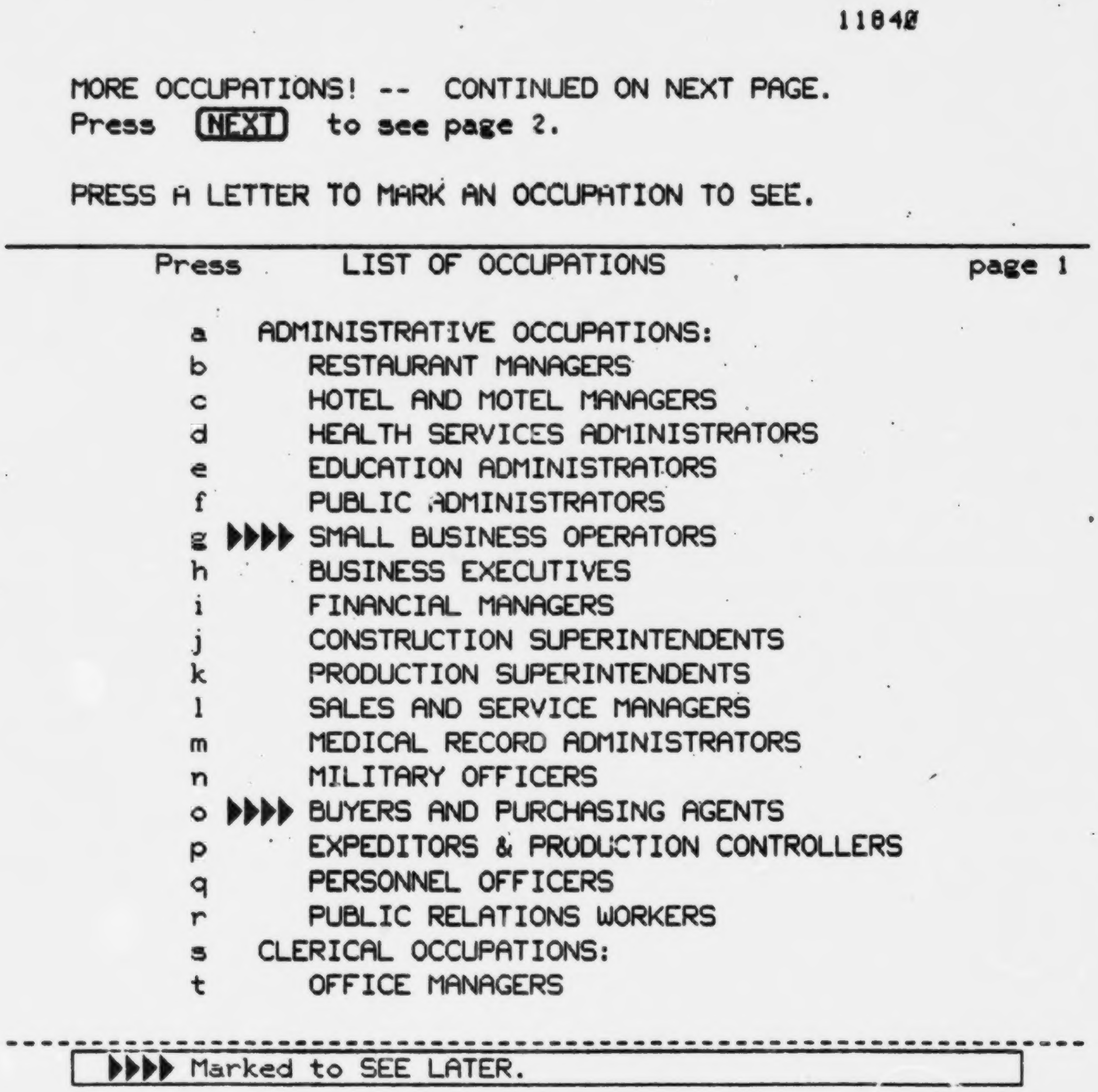


PRESS A LETTER TO SEE INFORMATION ON THAT OCCUPATION.

Press YOUR MARKED OCCUPATIONS

_a ▶▶▶▶ SURVEYOR HELPERS
b ▶▶▶▶ GROUNDSKEEPERS AND GARDENERS
c ▶▶▶▶ FORK LIFT OPERATORS
d ▶▶▶▶ FREIGHT HANDLERS

106



11840

MORE OCCUPATIONS! -- CONTINUED ON NEXT PAGE.
Press NEXT to see page 2.

PRESS A LETTER TO MARK AN OCCUPATION TO SEE.

Press	LIST OF OCCUPATIONS	page 1
a	ADMINISTRATIVE OCCUPATIONS:	
b	RESTAURANT MANAGERS	
c	HOTEL AND MOTEL MANAGERS	
d	HEALTH SERVICES ADMINISTRATORS	
e	EDUCATION ADMINISTRATORS	
f	PUBLIC ADMINISTRATORS	
g	▶▶▶▶ SMALL BUSINESS OPERATORS	
h	BUSINESS EXECUTIVES	
i	FINANCIAL MANAGERS	
j	CONSTRUCTION SUPERINTENDENTS	
k	PRODUCTION SUPERINTENDENTS	
l	SALES AND SERVICE MANAGERS	
m	MEDICAL RECORD ADMINISTRATORS	
n	MILITARY OFFICERS	
o	▶▶▶▶ BUYERS AND PURCHASING AGENTS	
p	EXPEDITORS & PRODUCTION CONTROLLERS	
q	PERSONNEL OFFICERS	
r	PUBLIC RELATIONS WORKERS	
s	CLERICAL OCCUPATIONS:	
t	OFFICE MANAGERS	

▶▶▶▶ Marked to SEE LATER.

BUYERS AND PURCHASING AGENTS (*1184)

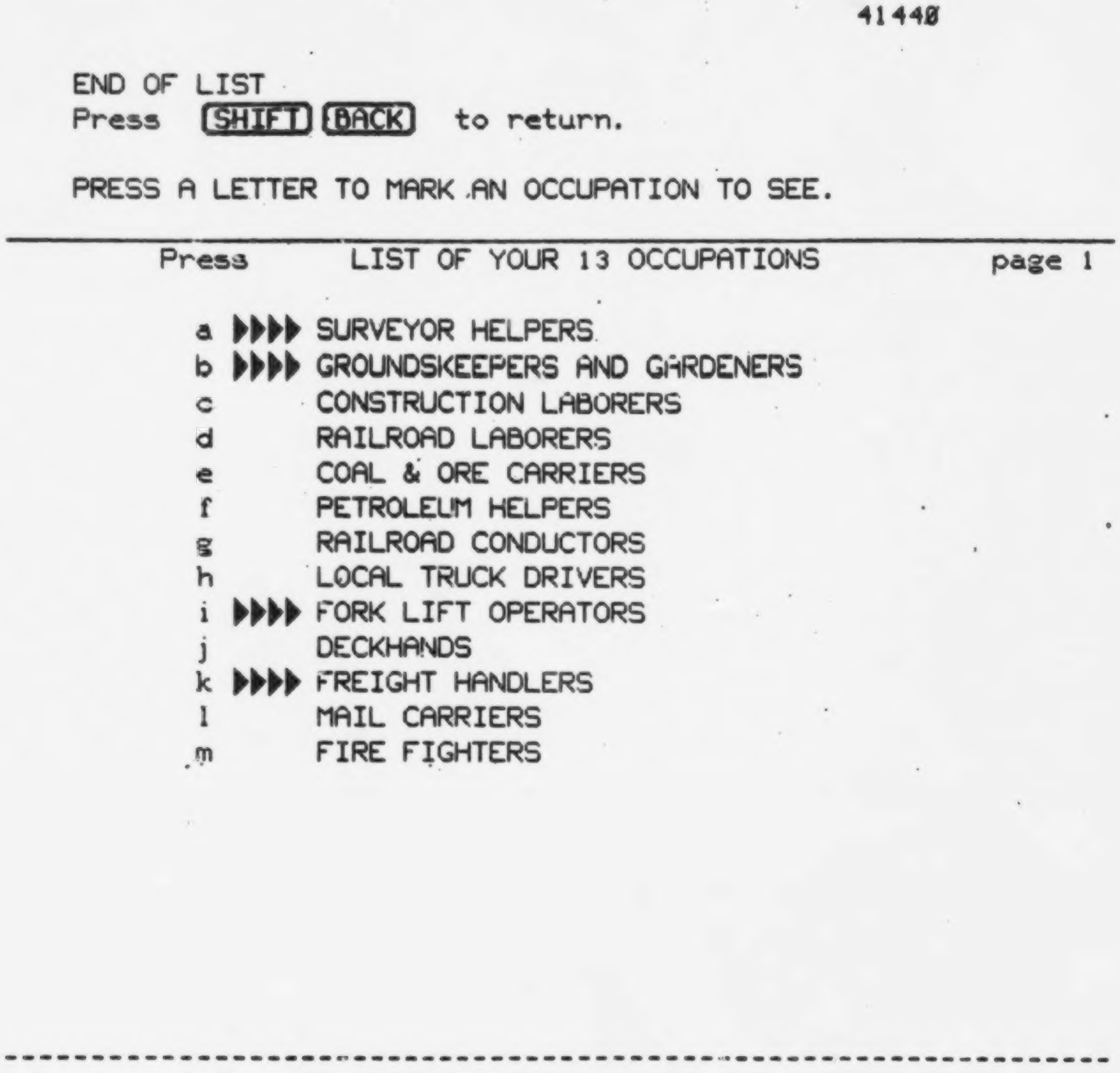
(Region: Chicago Metro)

Press:	To see:
a	Information about this occupation. (description, work setting, wages, outlook)
b	Education and training you will need. (skills, related educational programs, tips)
c	Where to get more information.
d	Summary of Important Characteristics of this occupation (QUEST attributes).
e	Information on individual employers for this occupation.

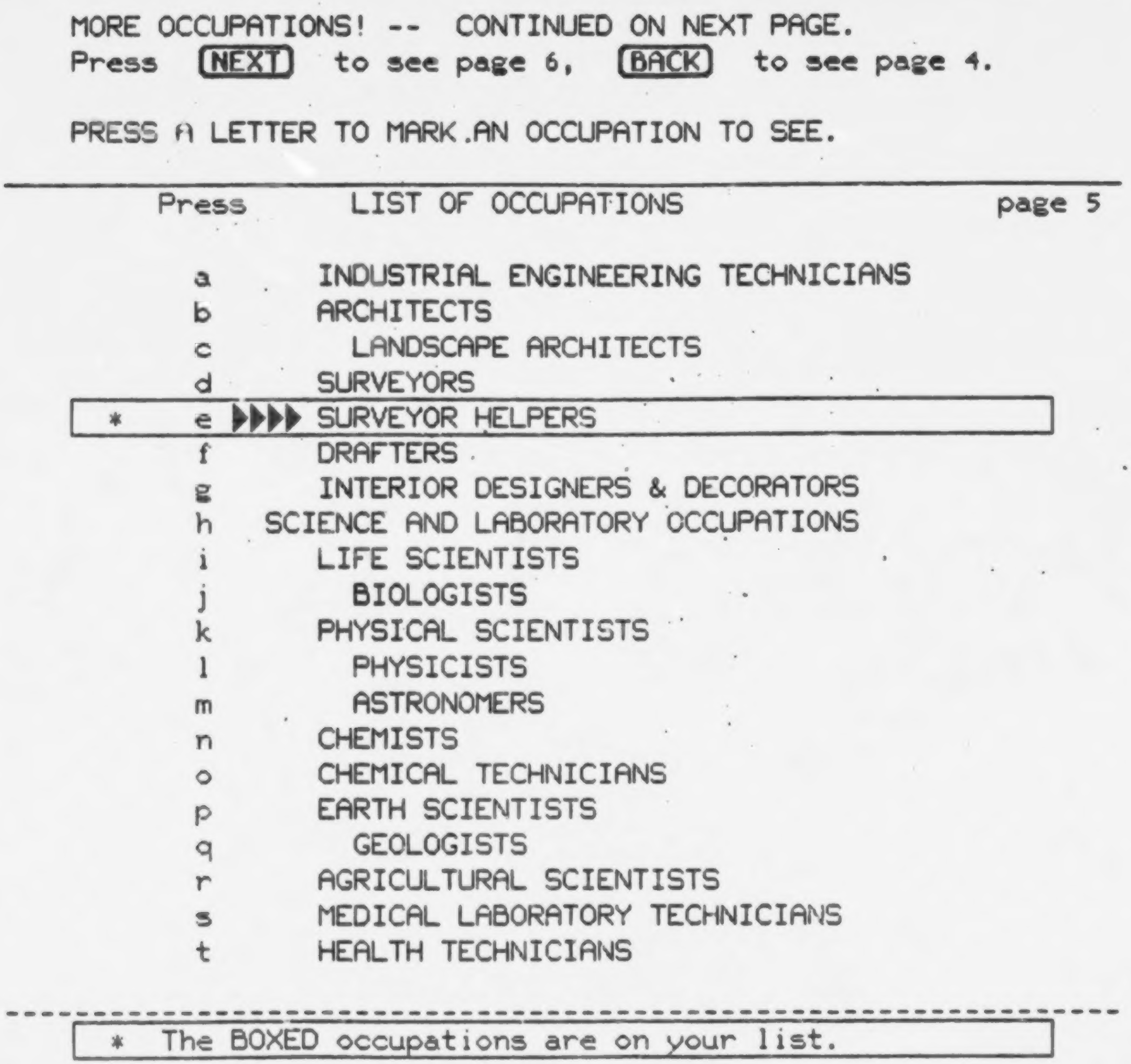
Press the letter of the information you would like to see.

Press SHIFT LAB to print this occupation, or
SHIFT DATA to choose a different region.

Press BACK to return.



```
                                                        41440

        END OF LIST
        Press  [SHIFT][BACK]  to return.

        PRESS A LETTER TO MARK AN OCCUPATION TO SEE.
  _________________________________________________________________
            Press     LIST OF YOUR 13 OCCUPATIONS          page 1

              a ▶▶▶▶ SURVEYOR HELPERS
              b ▶▶▶▶ GROUNDSKEEPERS AND GARDENERS
              c      CONSTRUCTION LABORERS
              d      RAILROAD LABORERS
              e      COAL & ORE CARRIERS
              f      PETROLEUM HELPERS
              g      RAILROAD CONDUCTORS
              h      LOCAL TRUCK DRIVERS
              i ▶▶▶▶ FORK LIFT OPERATORS
              j      DECKHANDS
              k ▶▶▶▶ FREIGHT HANDLERS
              l      MAIL CARRIERS
              m      FIRE FIGHTERS

  -----------------------------------------------------------------
```



```
MORE OCCUPATIONS! --  CONTINUED ON NEXT PAGE.
Press  [NEXT]  to see page 6,   [BACK]  to see page 4.

PRESS A LETTER TO MARK.AN OCCUPATION TO SEE.
________________________________________________________
     Press     LIST OF OCCUPATIONS                page 5

       a        INDUSTRIAL ENGINEERING TECHNICIANS
       b        ARCHITECTS
       c          LANDSCAPE ARCHITECTS
       d        SURVEYORS
 *     e ▶▶▶▶   SURVEYOR HELPERS
       f        DRAFTERS
       g        INTERIOR DESIGNERS & DECORATORS
       h     SCIENCE AND LABORATORY OCCUPATIONS
       i        LIFE SCIENTISTS
       j          BIOLOGISTS
       k        PHYSICAL SCIENTISTS
       l          PHYSICISTS
       m          ASTRONOMERS
       n        CHEMISTS
       o        CHEMICAL TECHNICIANS
       p        EARTH SCIENTISTS
       q          GEOLOGISTS
       r        AGRICULTURAL SCIENTISTS
       s        MEDICAL LABORATORY TECHNICIANS
       t        HEALTH TECHNICIANS

- - - - - - - - - - - - - - - - - - - - - - - - - - - - 
 *  The BOXED occupations are on your list.
```

```
                    CIS Employer Files

      You can choose from 104,033 Illinois firms.

             Press:

              a        Where in Illinois?

              b        What type of firm?

              c        How large a firm?



        Or, press NEXT to start at the beginning.


          Remember, at any time you can press:

                DATA  to move to the next section.
          SHIFT-DATA  to begin your search.
```

Description: Main index.
Note: unless otherwise specified, SHIFT-BACK will take you here, SHIFT-DATA will begin the search, and DATA will move to the next main section.

Keys Active:	a-c	to go to that main section number
	NEXT	to start the first main section (location).
	BACK	to return to the disclaimer
	SHIFT-BACK	to leave this lesson.

Directions: Press "a" or NEXT.

LOCATION

You may now specify where you want to work
in the state of Illinois.

You will be able to choose any of the following:

1. REGION
2. COUNTY
3. CITY
4. ZIP CODE

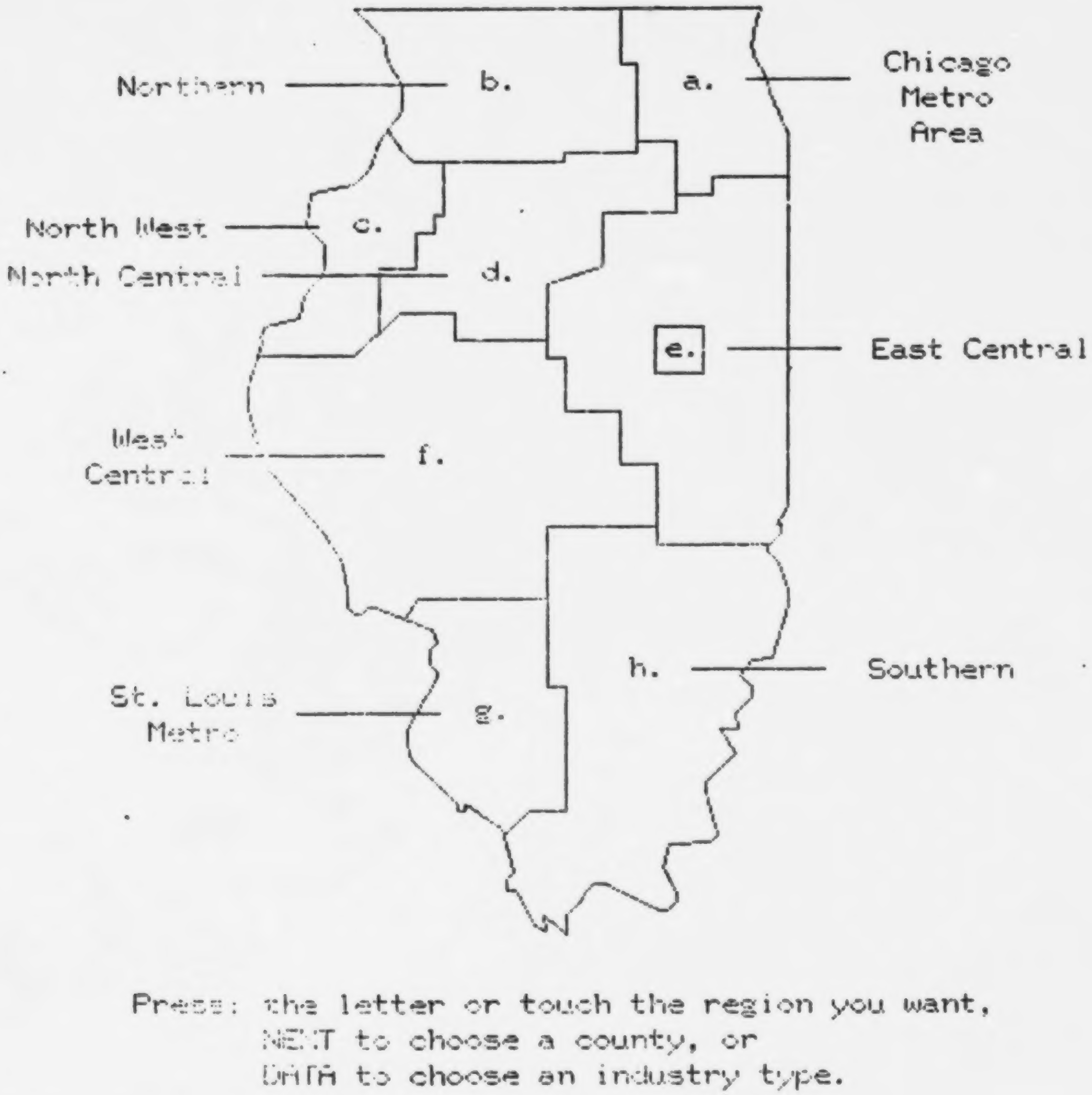
Press a number key to go there, or just press NEXT.

Description: Location subindex
Pressing BACK while in any of these sub-sections will return you here. Each of these sub-sections is more specific than the previous sub-section. For example, if you know the city name, there is no need to specify region or county. Returning here clears all choices made in the sub-sections.

Keys active:

1-4	to go to that sub-section.
NEXT	to go to the first sub-section (region).
BACK	to return to the main index.

Directions: Press "1" or NEXT.


Northern
b.
a.
Chicago Metro Area
North West
c.
North Central
d.
e.
East Central
West Central
f.
h.
Southern
St. Louis Metro
g.

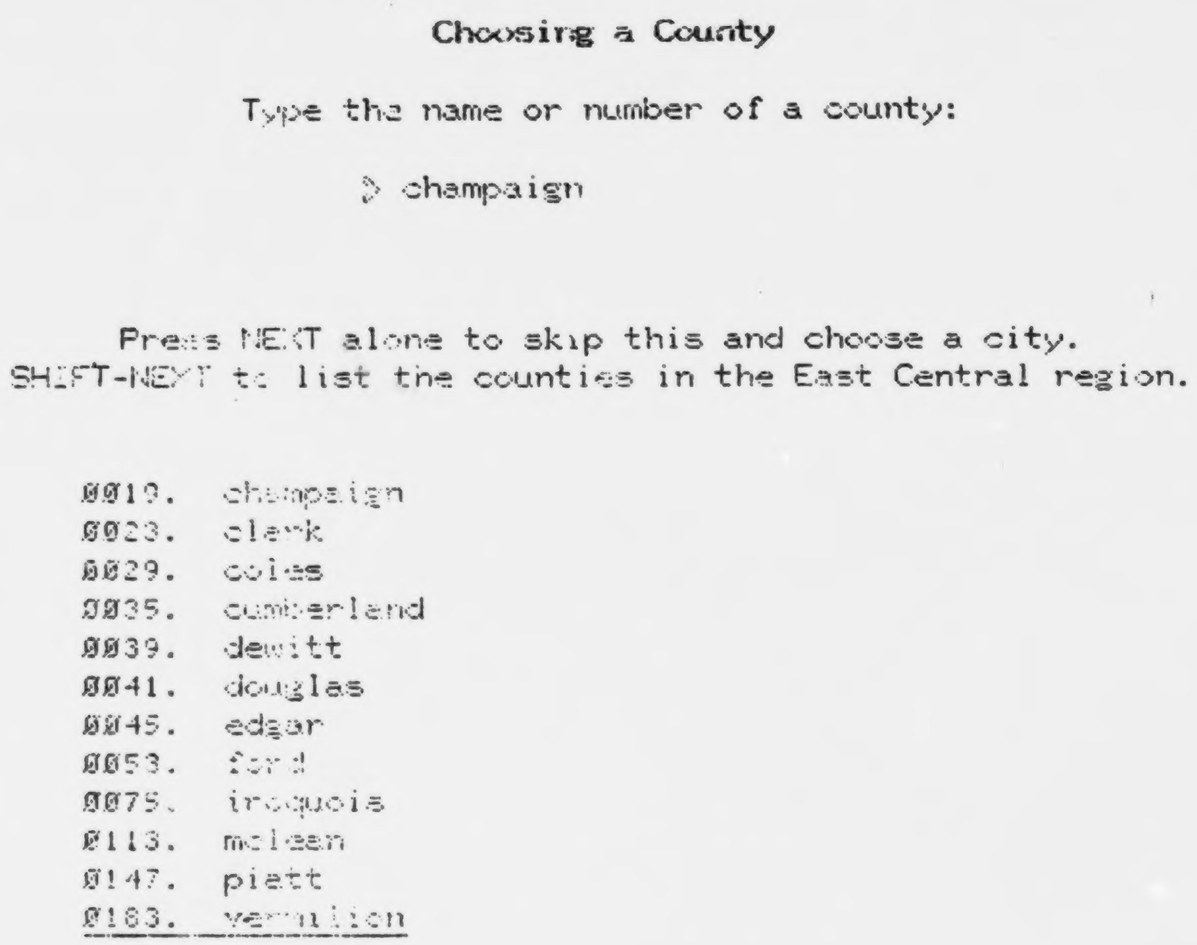
Press: the letter or touch the region you want,
NEXT to choose a county, or
DATA to choose an industry type.

Description: Region map.
You may choose 1 of the 8 regions by touching it, or typing its letter. Pressing NEXT above will skip to counties. Touching off the map clears any previous choice.

Keys active:

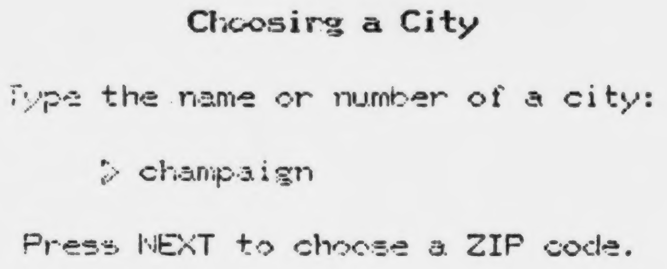
a-h (or touch)	to choose that region
NEXT	to choose a county
BACK	to return to location sub-index

Directions: Touch or type "e" to choose the East Central region, then press NEXT.



```
                 Choosing a County

          Type the name or number of a county:

                > champaign



      Press NEXT alone to skip this and choose a city.
SHIFT-NEXT to list the counties in the East Central region.


     0019.  champaign
     0023.  clark
     0029.  coles
     0035.  cumberland
     0039.  dewitt
     0041.  douglas
     0045.  edgar
     0053.  ford
     0075.  iroquois
     0113.  mclean
     0147.  piatt
     0183.  vermilion
```

Description:	County choice display. You may choose any Illinois county by typing all or part of its name. SHIFT-NEXT is available to see county names only if you've chosen a region. Pressing NEXT alone skips to cities.
Keys active:	NEXT to chose a city BACK to return to the location sub-index.
Directions:	Press SHIFT-NEXT to see counties in your region. Then type "champ" and press NEXT. The program recognizes you want "champaign" and fills it in for you. Now press NEXT again to choose a city.



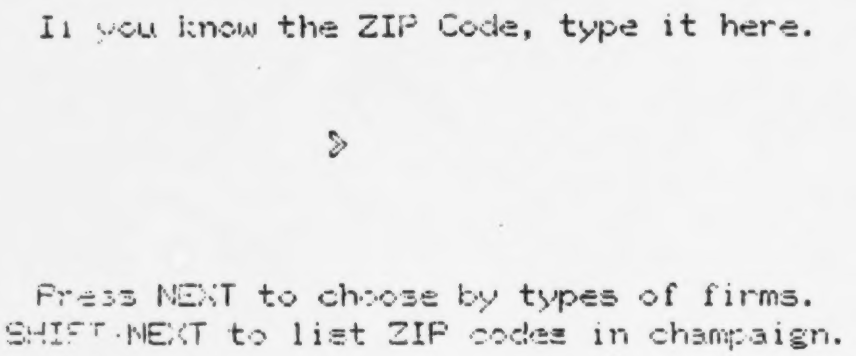
Choosing a City

Type the name or number of a city:

> champaign

Press NEXT to choose a ZIP code.

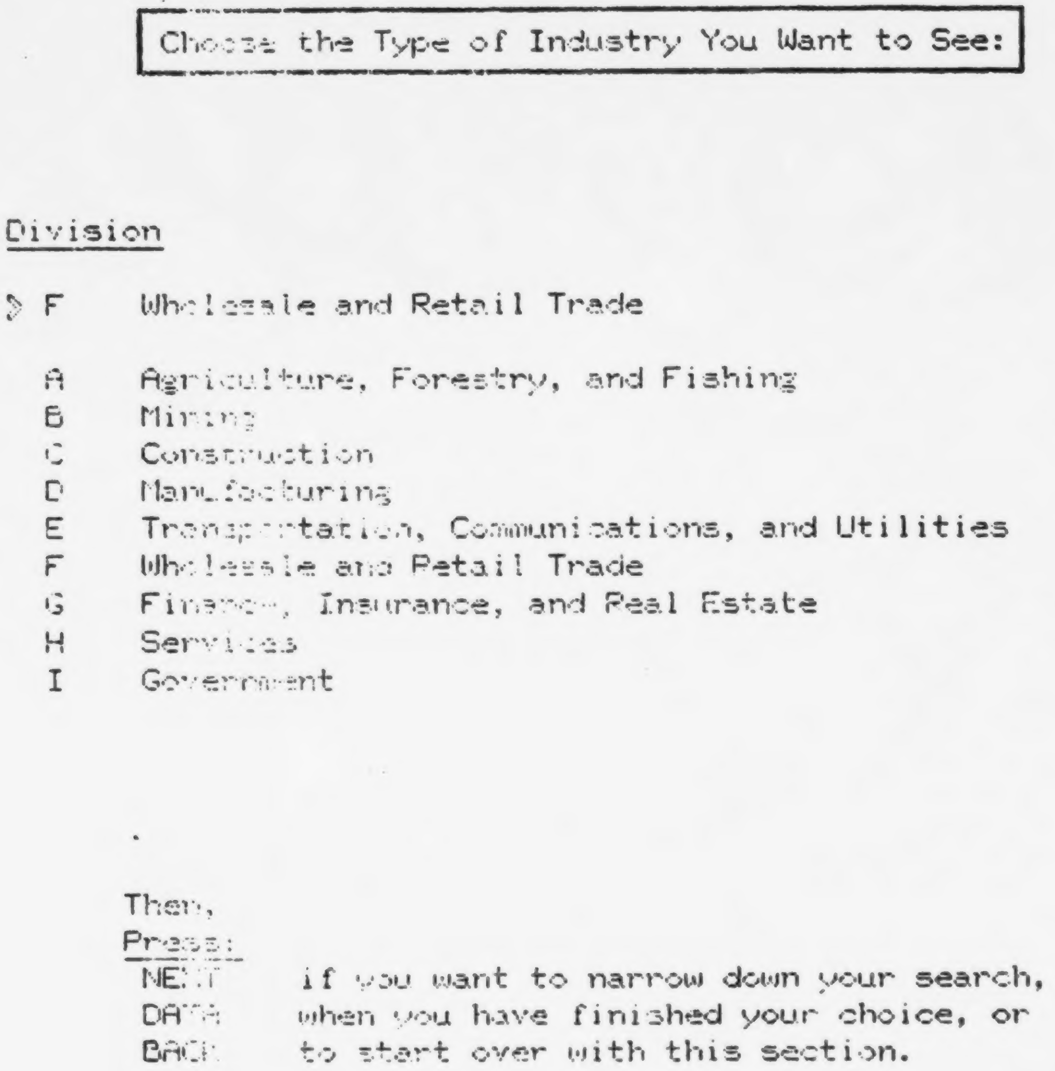
Description:	City choice display. Same as previous display, except you're asked to choose a city instead of a county.
Keys Active:	NEXT to go on to choose a ZIP code BACK to return to the location sub-index
Directions:	Type "champaign" and press NEXT. Then press NEXT again to choose a ZIP code.


If you know the ZIP Code, type it here.

>

Press NEXT to choose by types of firms.
SHIFT-NEXT to list ZIP codes in champaign.

Description:	ZIP Code choice display This is the smallest available location division. We won't use it in this sample search.
Keys Active:	NEXT to go to the next main section (types). BACK to return to the location sub-index.
Directions:	This time, press NEXT or DATA without typing a ZIP code.

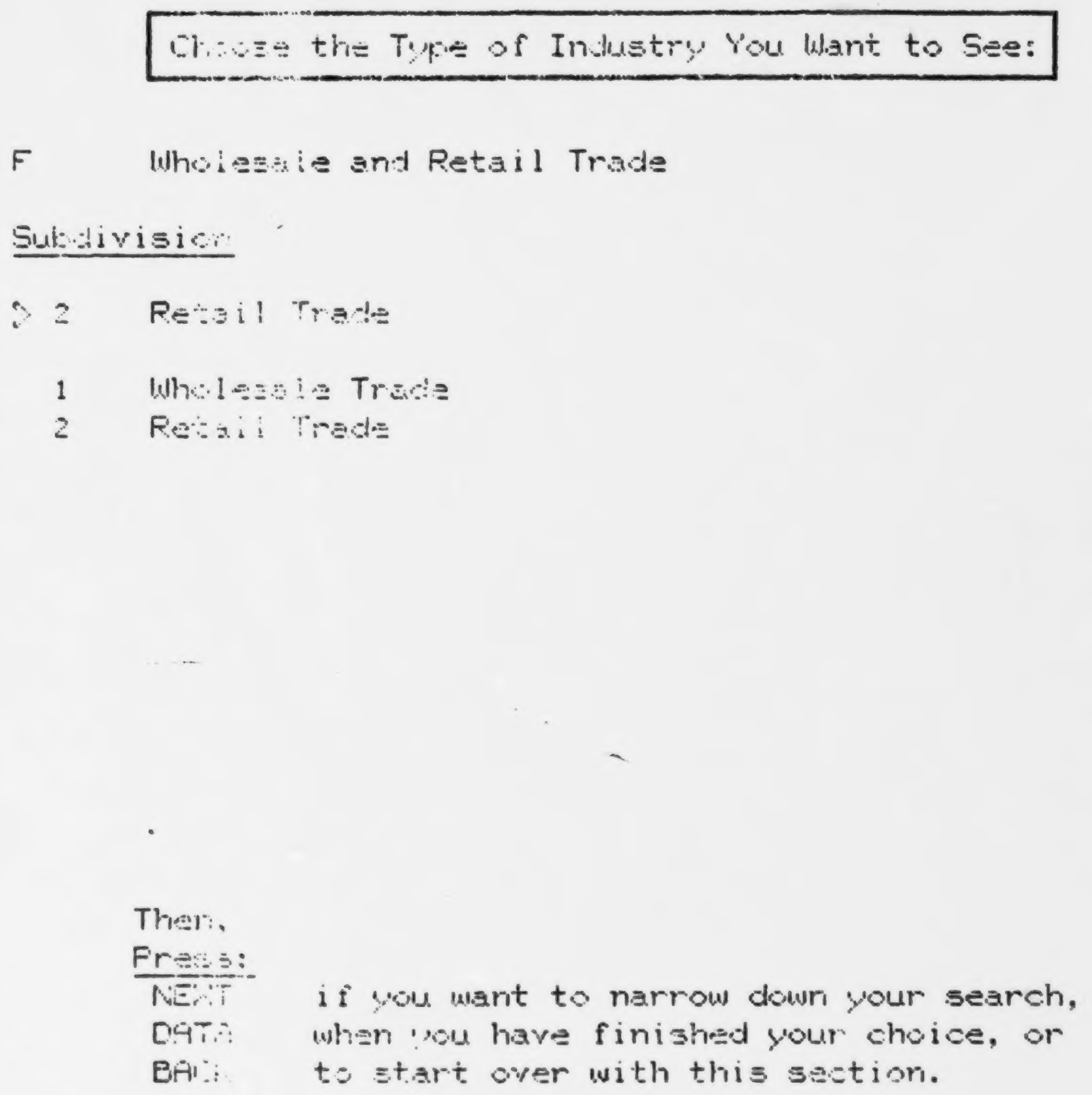


```
Choose the Type of Industry You Want to See:


Division

> F     Wholesale and Retail Trade

  A     Agriculture, Forestry, and Fishing
  B     Mining
  C     Construction
  D     Manufacturing
  E     Transportation, Communications, and Utilities
  F     Wholesale and Retail Trade
  G     Finance, Insurance, and Real Estate
  H     Services
  I     Government



      Then,
      Press:
       NEXT     if you want to narrow down your search,
       DATA     when you have finished your choice, or
       BACK     to start over with this section.
```

Description: Main SIC division.
In this new main section we choose a firm type according to the Standard Industrial Classification. Each sub-section allows us to be more specific in our choice.

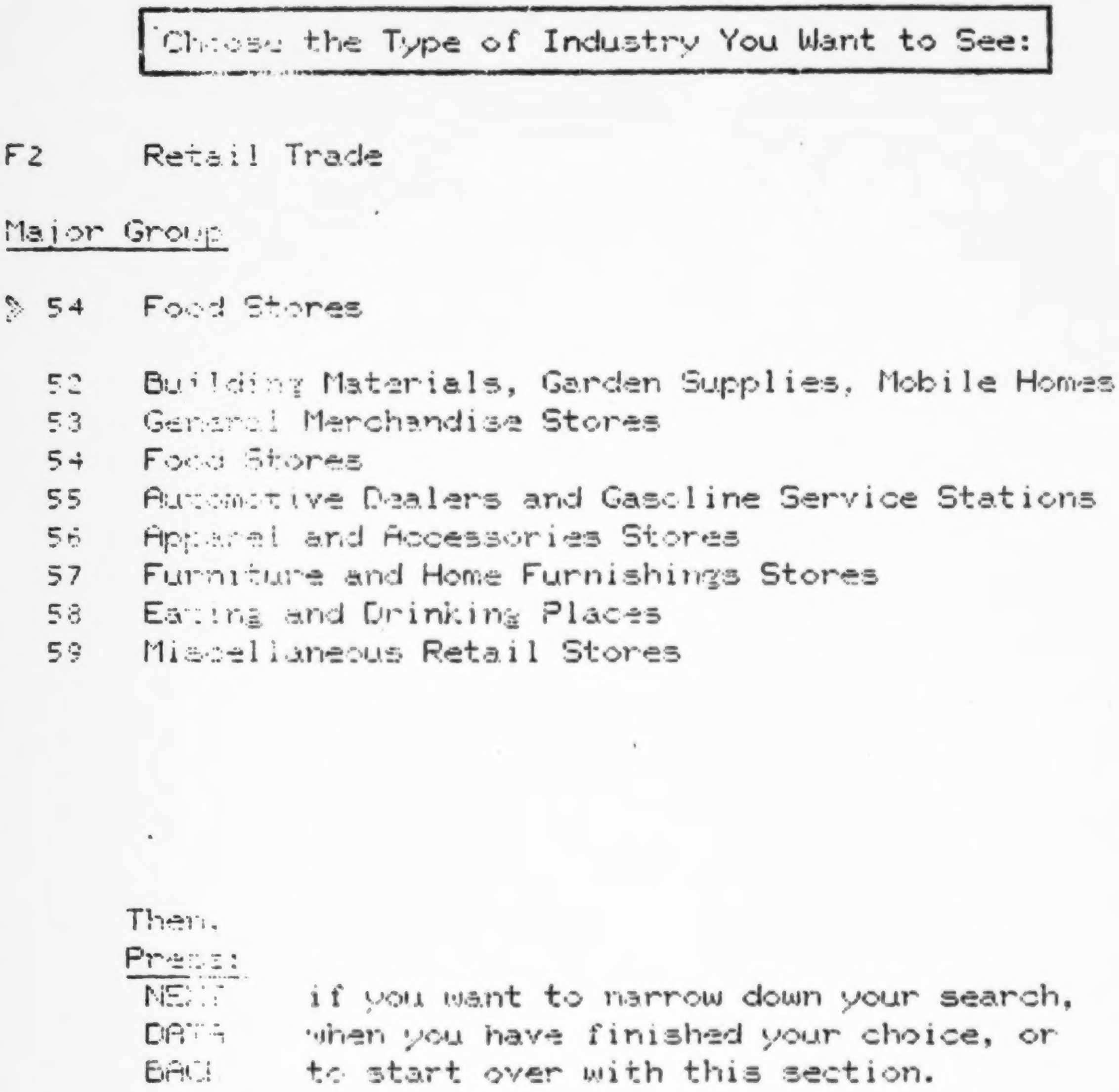
Keys active:	A-I	to choose that division
	NEXT	to narrow further, after choosing a division first.
	BACK	to return to the main index

Directions: Press "F" for "Wholesale and Retail Trade", then press NEXT.



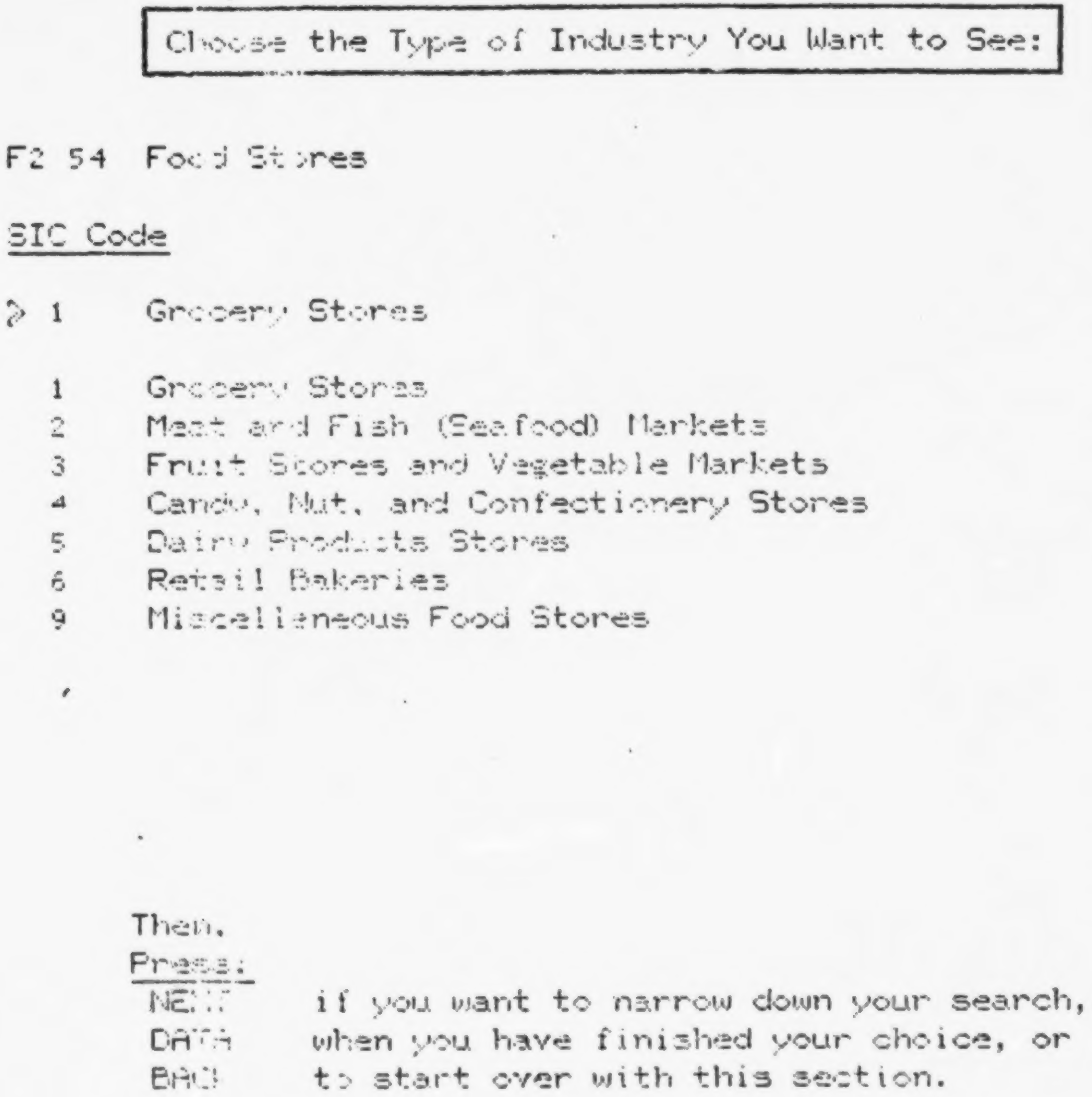
```
        Choose the Type of Industry You Want to See:

F       Wholesale and Retail Trade

Subdivision

> 2     Retail Trade

  1     Wholesale Trade
  2     Retail Trade



        Then,
        Press:
         NEXT   if you want to narrow down your search,
         DATA   when you have finished your choice, or
         BACK   to start over with this section.
```

Description:	SIC Subdivision Continuation of firm type choice, becoming one level more specific.	
Keys Active:	numeric	to choose a subdivision
	BACK	to restart this main section
Directions:	Type "2" for "Retail Trade", then press NEXT.	



```
                Choose the Type of Industry You Want to See:

F2      Retail Trade

Major Group

> 54    Food Stores

  52    Building Materials, Garden Supplies, Mobile Homes
  53    General Merchandise Stores
  54    Food Stores
  55    Automotive Dealers and Gasoline Service Stations
  56    Apparel and Accessories Stores
  57    Furniture and Home Furnishings Stores
  58    Eating and Drinking Places
  59    Miscellaneous Retail Stores




     Then,
     Press:
     NEXT      if you want to narrow down your search,
     DATA      when you have finished your choice, or
     BACK      to start over with this section.
```

Description:	SIC Major Group Next level of specification.	
Keys Active:	numeric	to choose a Major Group
	BACK	to restart this main section
Directions:	Type "54" for "Food Stores", then press NEXT.	



Choose the Type of Industry You Want to See:

F2 54 Food Stores

SIC Code

> 1 Grocery Stores

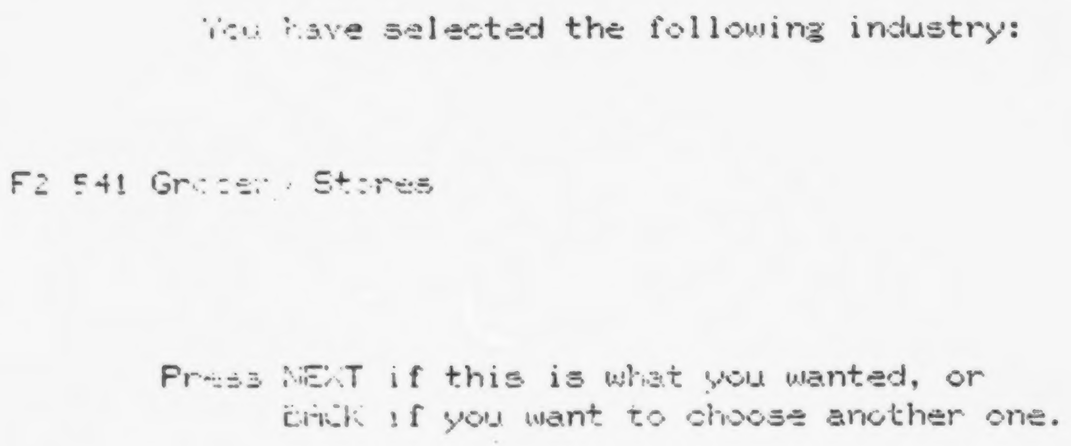
1 Grocery Stores
2 Meat and Fish (Seafood) Markets
3 Fruit Stores and Vegetable Markets
4 Candy, Nut, and Confectionery Stores
5 Dairy Products Stores
6 Retail Bakeries
9 Miscellaneous Food Stores

Then,
Press:
NEXT if you want to narrow down your search,
DATA when you have finished your choice, or
BACK to start over with this section.

Description: SIC final level of specification.

Keys active:	numeric	to choose final digit of SIC code
	NEXT	to go and verify your SIC selection
	BACK	to restart this main section

Directions: Type "1" for "Grocery Stores", then press NEXT.

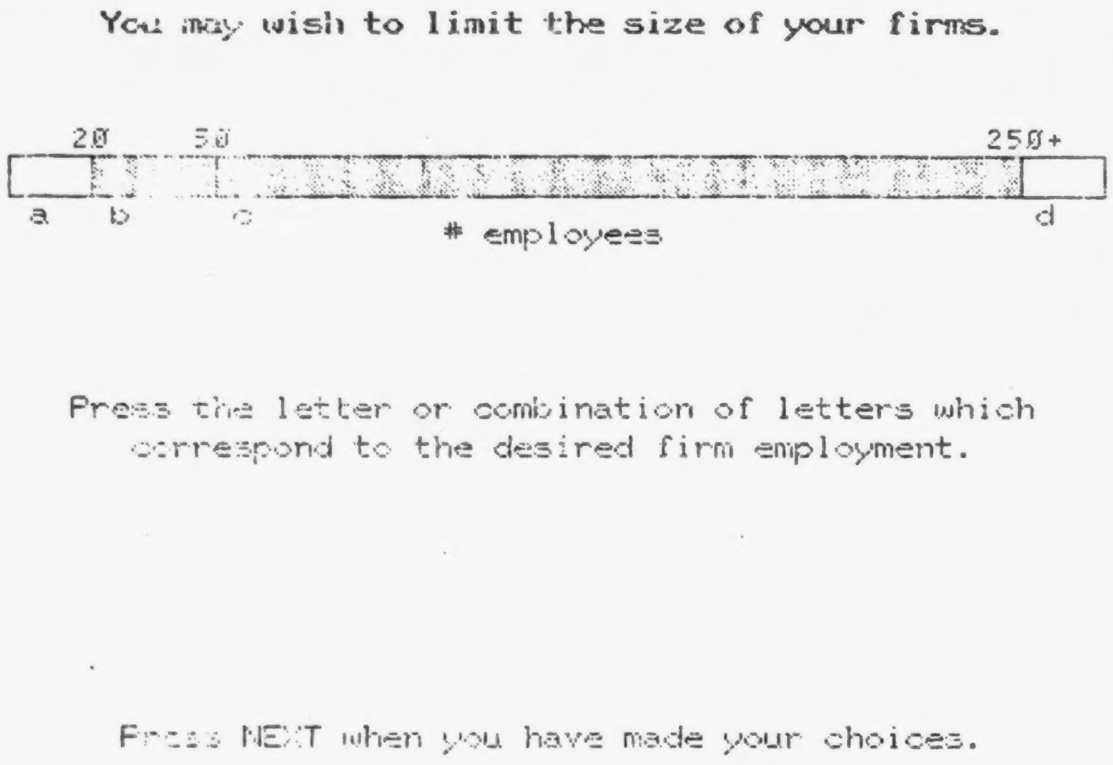


You have selected the following industry:

F2 541 Grocery Stores

Press NEXT if this is what you wanted, or
BACK if you want to choose another one.

Directions:	Verification of SIC Here you are given a chance to accept or reject your final SIC code selection.
Keys active:	NEXT to go to the next main section BACK to restart this main section
Directions:	Press NEXT.

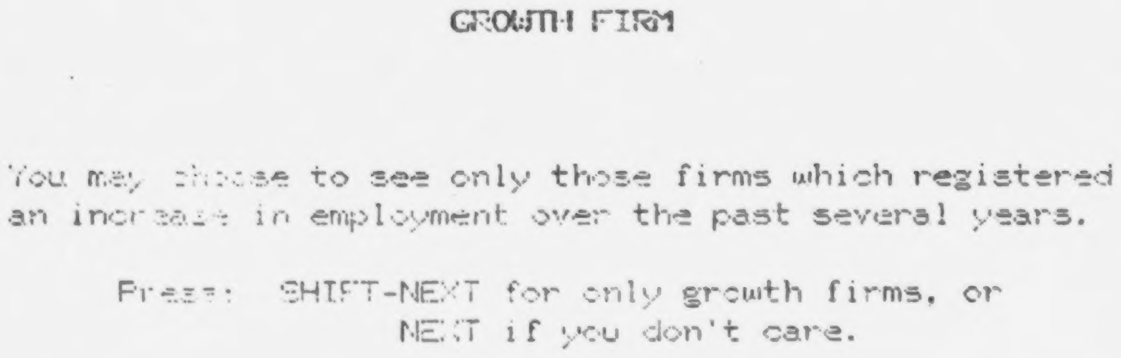


You may wish to limit the size of your firms.

Press the letter or combination of letters which correspond to the desired firm employment.

Press NEXT when you have made your choices.

Description:	Firm Size You may choose the size of the firms you want to see, in terms of ranges of number of employees.	
Keys active:	a-d	to pick a employee range
	NEXT	to go on to growth
	BACK	to return to the main index
Directions:	Experiment with the "a" through "d" keys to get a feel for how to pick any range. When you're done, select only sections "b" and "c". They should be the only sections shaded, and represent the range from 20 to 250 employees. After doing this, press NEXT to go on.	

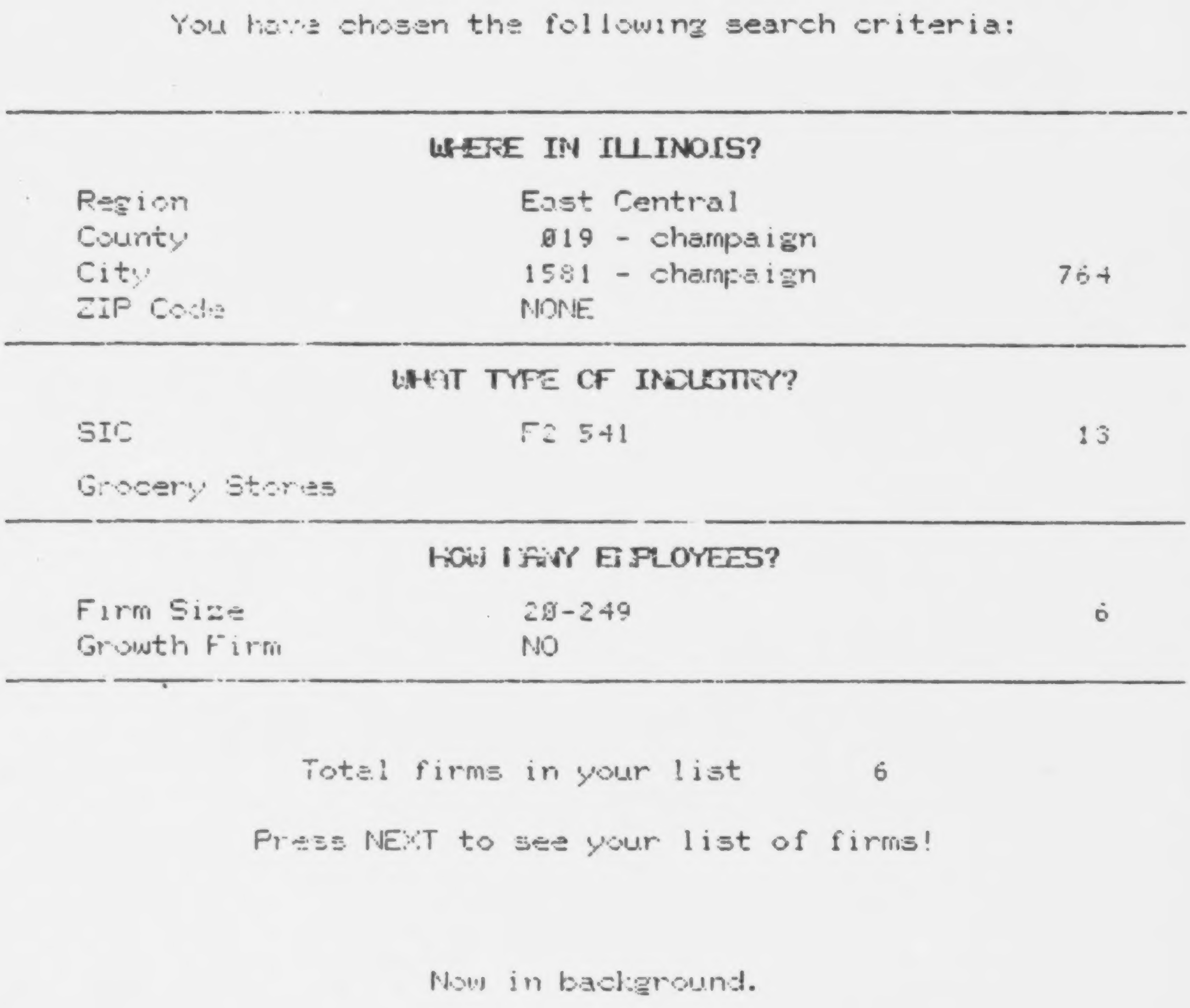


GROWTH FIRM

You may choose to see only those firms which registered an increase in employment over the past several years.

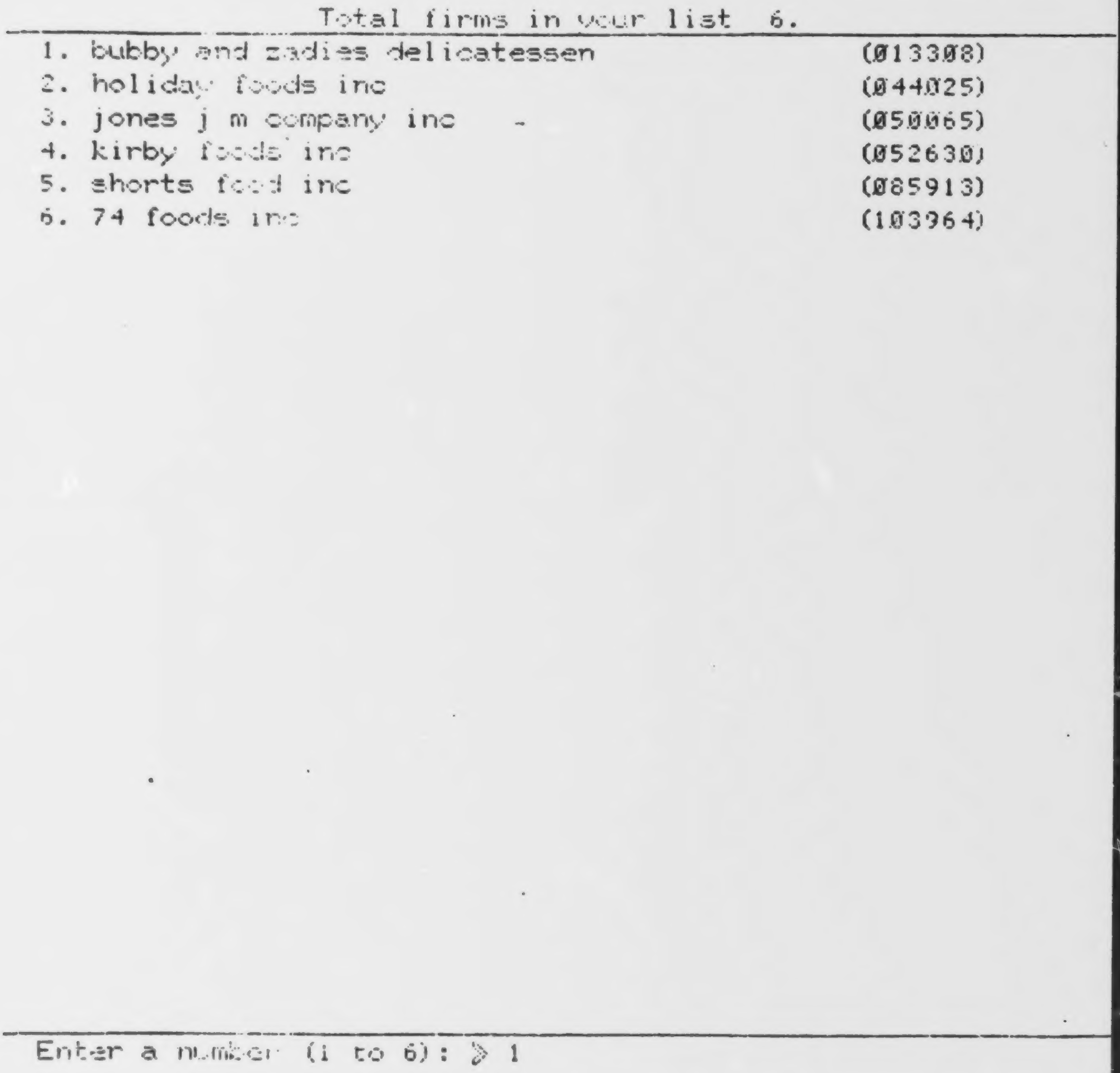
Press: SHIFT-NEXT for only growth firms, or
NEXT if you don't care.

Description:	Growth You may choose to see firms which employ more persons now than they used to employ.	
Keys active:	NEXT	to begin the search
	SHIFT-NEXT	to choose growth firms, then begin the search
	BACK	to return to the main index
Directions:	We won't choose growth firms this time, so press NEXT.	



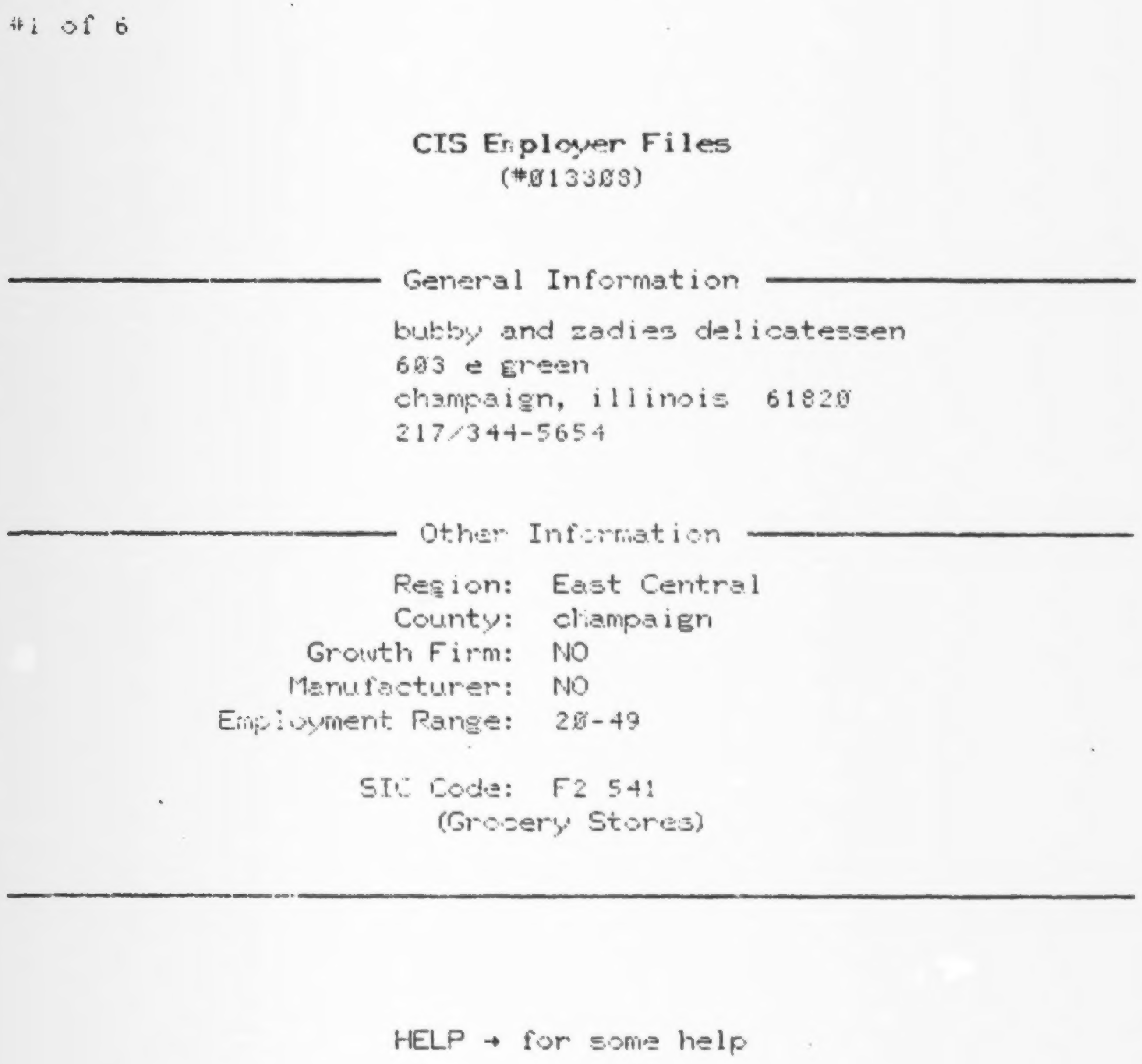
```
          You have chosen the following search criteria:

 -----------------------------------------------------------------
                       WHERE IN ILLINOIS?
    Region                  East Central
    County                   019 - champaign
    City                    1581 - champaign                 764
    ZIP Code                NONE
 -----------------------------------------------------------------
                     WHAT TYPE OF INDUSTRY?
    SIC                     F2 541                            13

    Grocery Stores
 -----------------------------------------------------------------
                       HOW MANY EMPLOYEES?
    Firm Size               20-249                             6
    Growth Firm             NO
 -----------------------------------------------------------------

                Total firms in your list        6

             Press NEXT to see your list of firms!


                      Now in background.
```

Description:	Search This is where the search is actually done. The numbers that appear on the right side of the screen are how many firms are on your list at that point.
Keys active:	NEXT to start the search BACK to return to the main index
Directions:	Press NEXT to do the search. When it is done, press NEXT to see the results.



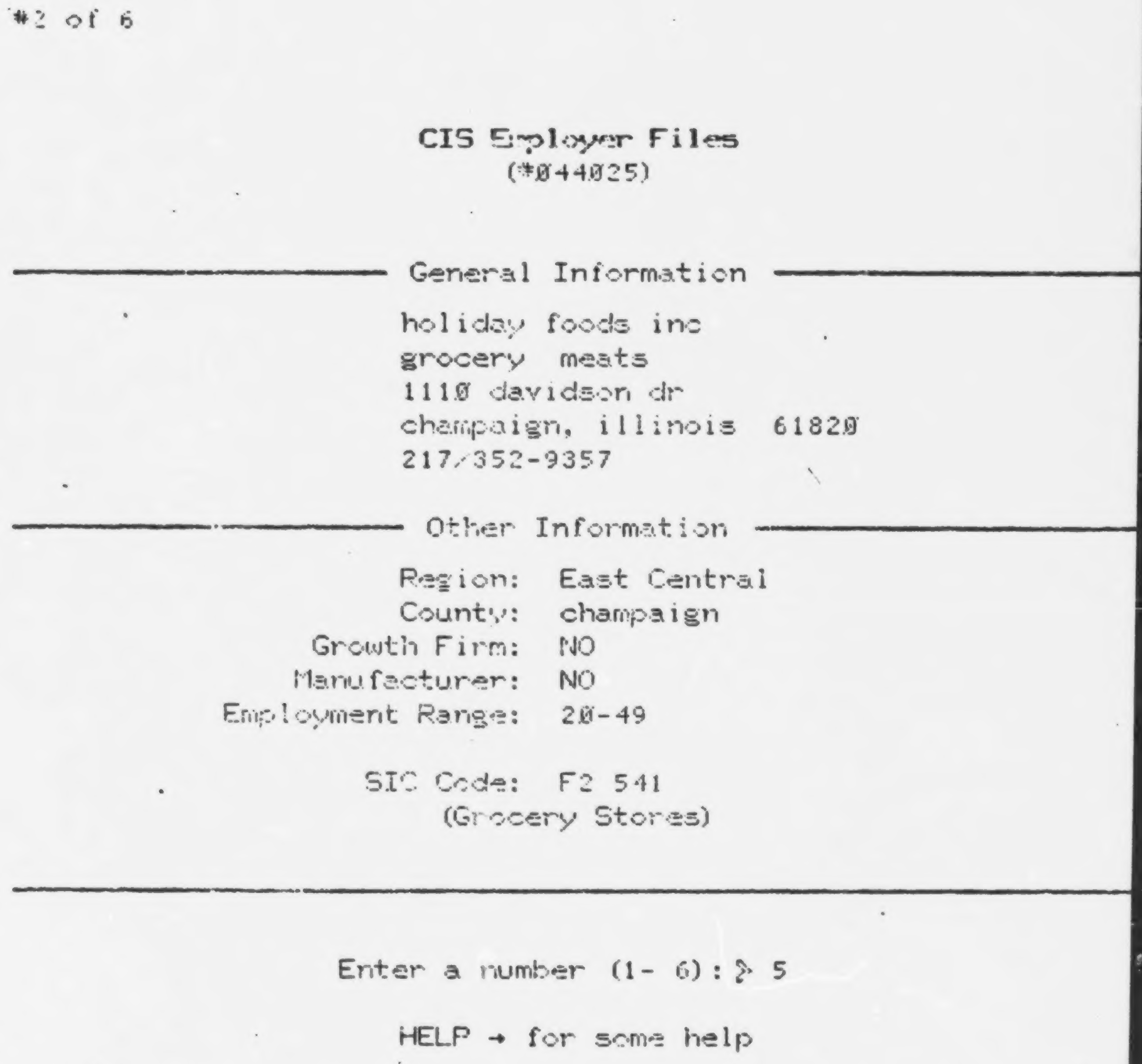
```
              Total firms in your list  6.
 1. bubby and zadies delicatessen                    (013308)
 2. holiday foods inc                                (044025)
 3. jones j m company inc                            (050065)
 4. kirby foods inc                                  (052630)
 5. shorts food inc                                  (085913)
 6. 74 foods inc                                     (103964)

Enter a number (1 to 6): > 1
```

Description:	List of your firms The number on the right side of the screen is based on the firm's alphabetical position in our entire list of 104,033 firms.	
Keys active:	numeric	to choose which firm you want to see
	BACK	to return to the main index
Directions:	Type "1" for "bubby and zadies" and press NEXT.	



```
#1 of 6

                     CIS Employer Files
                         (#013308)

------------------- General Information -------------------
                  bubby and zadies delicatessen
                  603 e green
                  champaign, illinois  61820
                  217/344-5654

-------------------- Other Information --------------------
                  Region:  East Central
                  County:  champaign
             Growth Firm:  NO
            Manufacturer:  NO
        Employment Range:  20-49

                SIC Code:  F2 541
                    (Grocery Stores)

-----------------------------------------------------------


                   HELP → for some help
```

Description:	Firm Information Display This is an example of an actual firm, and all the information we have available.
Keys active	NEXT to see the next firm in your list (2). BACK to return to the firm list. EDIT to choose a firm to see by number. HELP for some extra help.
Directions:	Press NEXT to see the next firm.



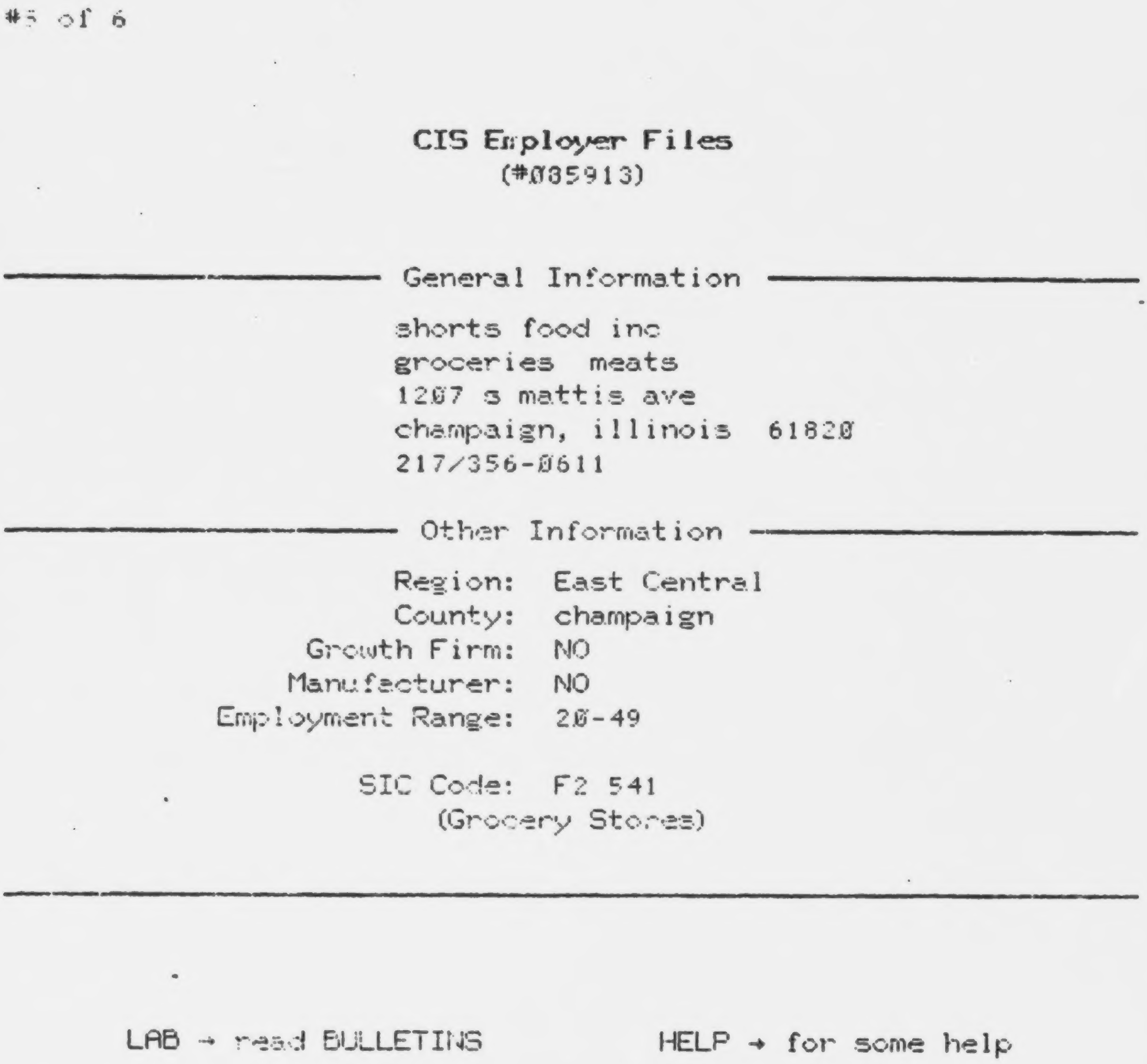
```
#2 of 6

                    CIS Employer Files
                       (#044025)

──────────────── General Information ────────────────
                 holiday foods inc
                 grocery  meats
                 1110 davidson dr
                 champaign, illinois  61820
                 217/352-9357
──────────────── Other Information ──────────────────
                 Region:  East Central
                 County:  champaign
            Growth Firm:  NO
           Manufacturer:  NO
       Employment Range:  20-49

               SIC Code:  F2 541
                   (Grocery Stores)
─────────────────────────────────────────────────────

             Enter a number (1- 6): > 5

               HELP → for some help
```

Description: Firm Information Display

Keys active:

NEXT	to see the next firm in your list
BACK	to see the previous firm in your list
SHIFT-BACK	to return to the firm list.
EDIT	to choose a firm to see by number
HELP	for some extra help

Directions: Press EDIT and type "5". Now press NEXT to see the fifth firm from your list.



#5 of 6

CIS Employer Files
(#085913)

General Information

shorts food inc
groceries meats
1207 s mattis ave
champaign, illinois 61820
217/356-0611

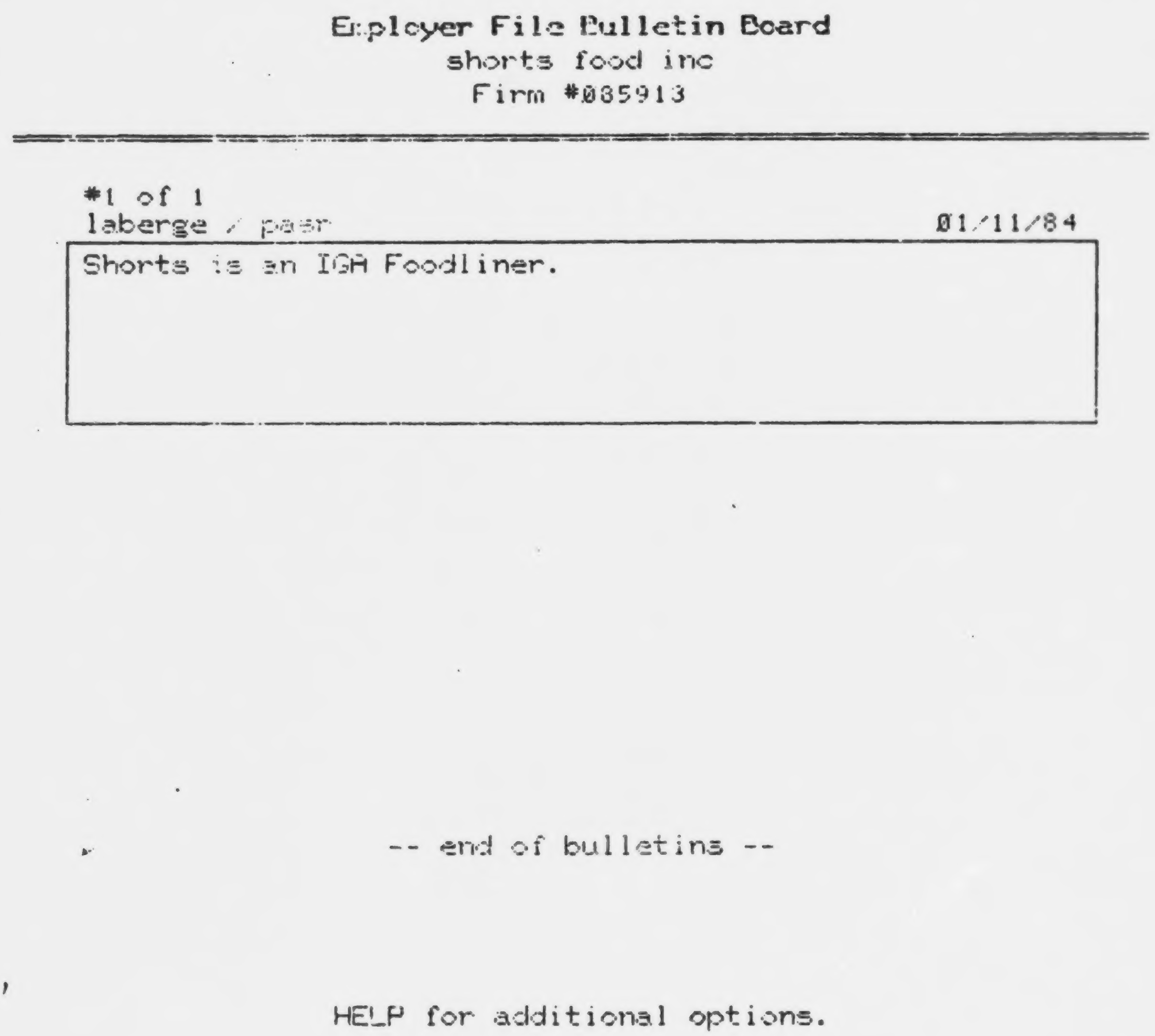
Other Information

Region: East Central
County: champaign
Growth Firm: NO
Manufacturer: NO
Employment Range: 20-49

SIC Code: F2 541
(Grocery Stores)

LAB → read BULLETINS HELP → for some help

Description:	**Firm Information Display** **Same as previous display, except a bulletin containing extra information is available for this firm. Notice the message in the lower left of the screen.**
Keys active	**same as before and...** **LAB to read bulletins**
Directions:	**Press LAB.**



```
                    Employer File Bulletin Board
                          shorts food inc
                           Firm #085913
================================================================

  #1 of 1
  laberge / pasr                                        01/11/84
 +--------------------------------------------------------------+
 | Shorts is an IGA Foodliner.                                  |
 |                                                              |
 |                                                              |
 |                                                              |
 +--------------------------------------------------------------+




                      -- end of bulletins --



                   HELP for additional options.
```

Description: Bulletin Board
This is a sample bulletin written to show you what a bulletin may look like. Any firm may have an unlimited number of bulletins written on it.

Keys active: NEXT, BACK, or SHIFT-BACK to return to the firm display
HELP for extra information

Directions: None

ILLINOIS BUSINESS AND INDUSTRY PROFILES: SELECTED SCREEN COPIES

GENERAL INDEX TO CIS

1. **QUESTIONS**
   to help you choose an occupation.
   (QUEST)

2. **INFORMATION**
   on occupations, programs, and schools.

Press the number of the section you would like to see.

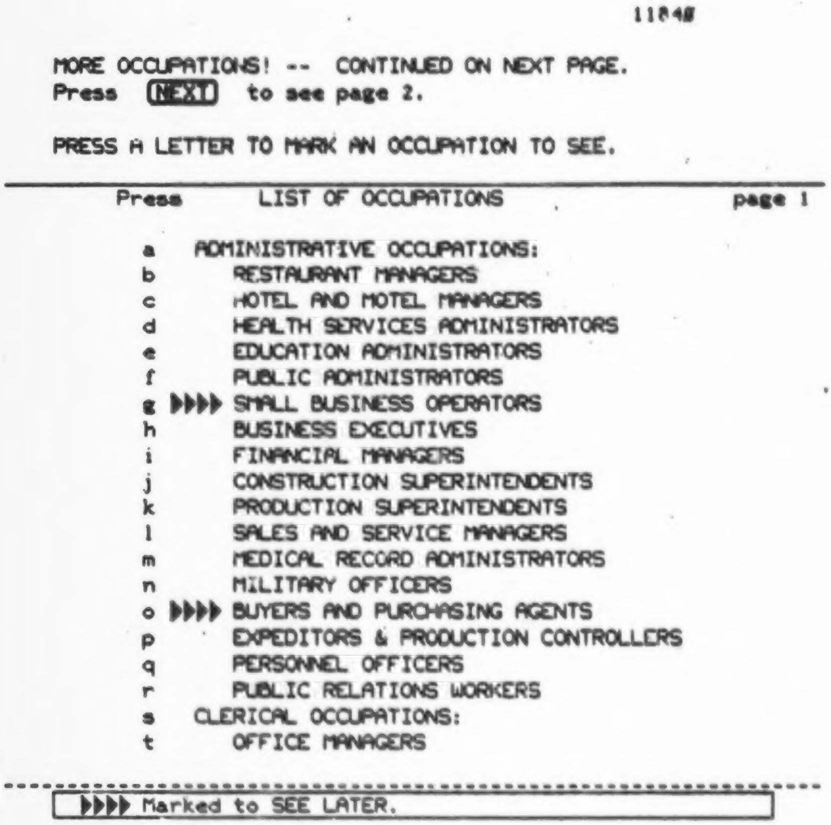
CIS INFORMATION INDEX

1. **OCCUPATIONS**
   by Job Family Clusters

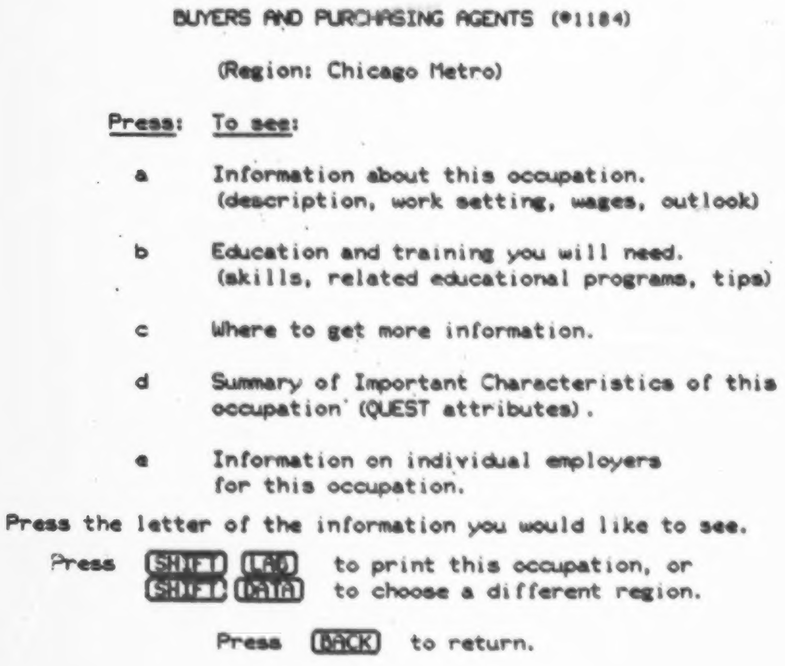
2. **PROGRAMS**
   of Preparation and Study

3. **SCHOOLS**
   (Illinois and National)

Press the number of the section you would like to see.

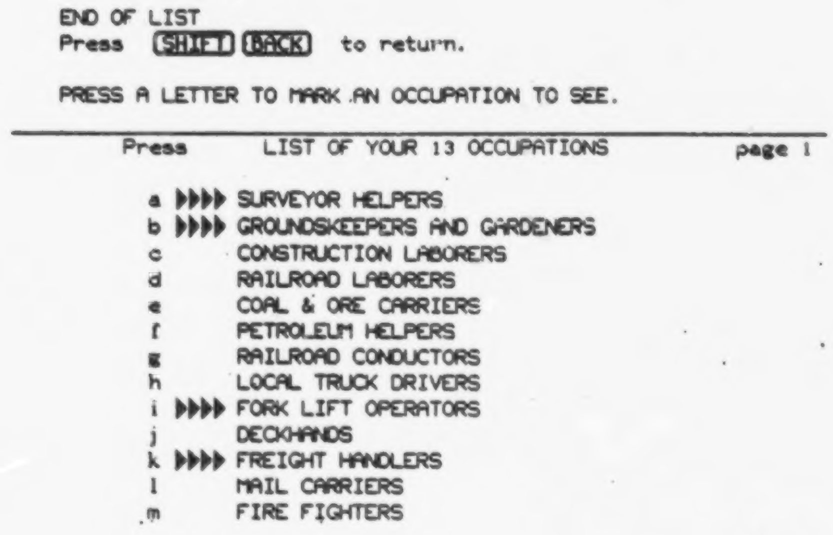


```
                                                  11840

MORE OCCUPATIONS! -- CONTINUED ON NEXT PAGE.
Press  NEXT  to see page 2.

PRESS A LETTER TO MARK AN OCCUPATION TO SEE.
__________________________________________________________
      Press      LIST OF OCCUPATIONS                page 1

        a   ADMINISTRATIVE OCCUPATIONS:
        b      RESTAURANT MANAGERS
        c      HOTEL AND MOTEL MANAGERS
        d      HEALTH SERVICES ADMINISTRATORS
        e      EDUCATION ADMINISTRATORS
        f      PUBLIC ADMINISTRATORS
        g ▶▶▶▶ SMALL BUSINESS OPERATORS
        h      BUSINESS EXECUTIVES
        i      FINANCIAL MANAGERS
        j      CONSTRUCTION SUPERINTENDENTS
        k      PRODUCTION SUPERINTENDENTS
        l      SALES AND SERVICE MANAGERS
        m      MEDICAL RECORD ADMINISTRATORS
        n      MILITARY OFFICERS
        o ▶▶▶▶ BUYERS AND PURCHASING AGENTS
        p      EXPEDITORS & PRODUCTION CONTROLLERS
        q      PERSONNEL OFFICERS
        r      PUBLIC RELATIONS WORKERS
        s   CLERICAL OCCUPATIONS:
        t      OFFICE MANAGERS
----------------------------------------------------------
  ▶▶▶▶ Marked to SEE LATER.
```

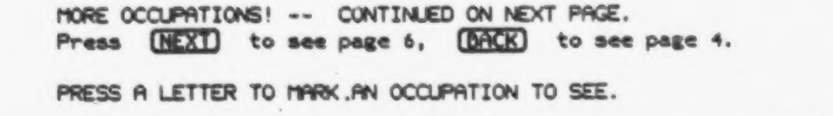


```
          BUYERS AND PURCHASING AGENTS (*1184)

               (Region: Chicago Metro)

     Press:  To see:

       a     Information about this occupation.
             (description, work setting, wages, outlook)

       b     Education and training you will need.
             (skills, related educational programs, tips)

       c     Where to get more information.

       d     Summary of Important Characteristics of this
             occupation (QUEST attributes).

       e     Information on individual employers
             for this occupation.

Press the letter of the information you would like to see.

   Press  SHIFT LAB   to print this occupation, or
          SHIFT DATA  to choose a different region.

             Press  BACK  to return.
```

41448



```
END OF LIST
Press  SHIFT  BACK   to return.

PRESS A LETTER TO MARK AN OCCUPATION TO SEE.
_____________________________________________________________
        Press      LIST OF YOUR 13 OCCUPATIONS           page 1

          a ▶▶▶▶ SURVEYOR HELPERS
          b ▶▶▶▶ GROUNDSKEEPERS AND GARDENERS
          c      CONSTRUCTION LABORERS
          d      RAILROAD LABORERS
          e      COAL & ORE CARRIERS
          f      PETROLEUM HELPERS
          g      RAILROAD CONDUCTORS
          h      LOCAL TRUCK DRIVERS
          i ▶▶▶▶ FORK LIFT OPERATORS
          j      DECKHANDS
          k ▶▶▶▶ FREIGHT HANDLERS
          l      MAIL CARRIERS
          m      FIRE FIGHTERS
```



```
MORE OCCUPATIONS! --  CONTINUED ON NEXT PAGE.
Press  NEXT   to see page 6,   BACK   to see page 4.

PRESS A LETTER TO MARK AN OCCUPATION TO SEE.
_____________________________________________________________
        Press      LIST OF OCCUPATIONS                   page 5

          a      INDUSTRIAL ENGINEERING TECHNICIANS
          b      ARCHITECTS
          c        LANDSCAPE ARCHITECTS
          d      SURVEYORS
  *       e ▶▶▶▶ SURVEYOR HELPERS
          f      DRAFTERS
          g      INTERIOR DESIGNERS & DECORATORS
          h   SCIENCE AND LABORATORY OCCUPATIONS
          i      LIFE SCIENTISTS
          j        BIOLOGISTS
          k      PHYSICAL SCIENTISTS
          l        PHYSICISTS
          m        ASTRONOMERS
          n      CHEMISTS
          o      CHEMICAL TECHNICIANS
          p      EARTH SCIENTISTS
          q        GEOLOGISTS
          r      AGRICULTURAL SCIENTISTS
          s      MEDICAL LABORATORY TECHNICIANS
          t      HEALTH TECHNICIANS
-------------------------------------------------------------
  * The BOXED occupations are on your list.
```

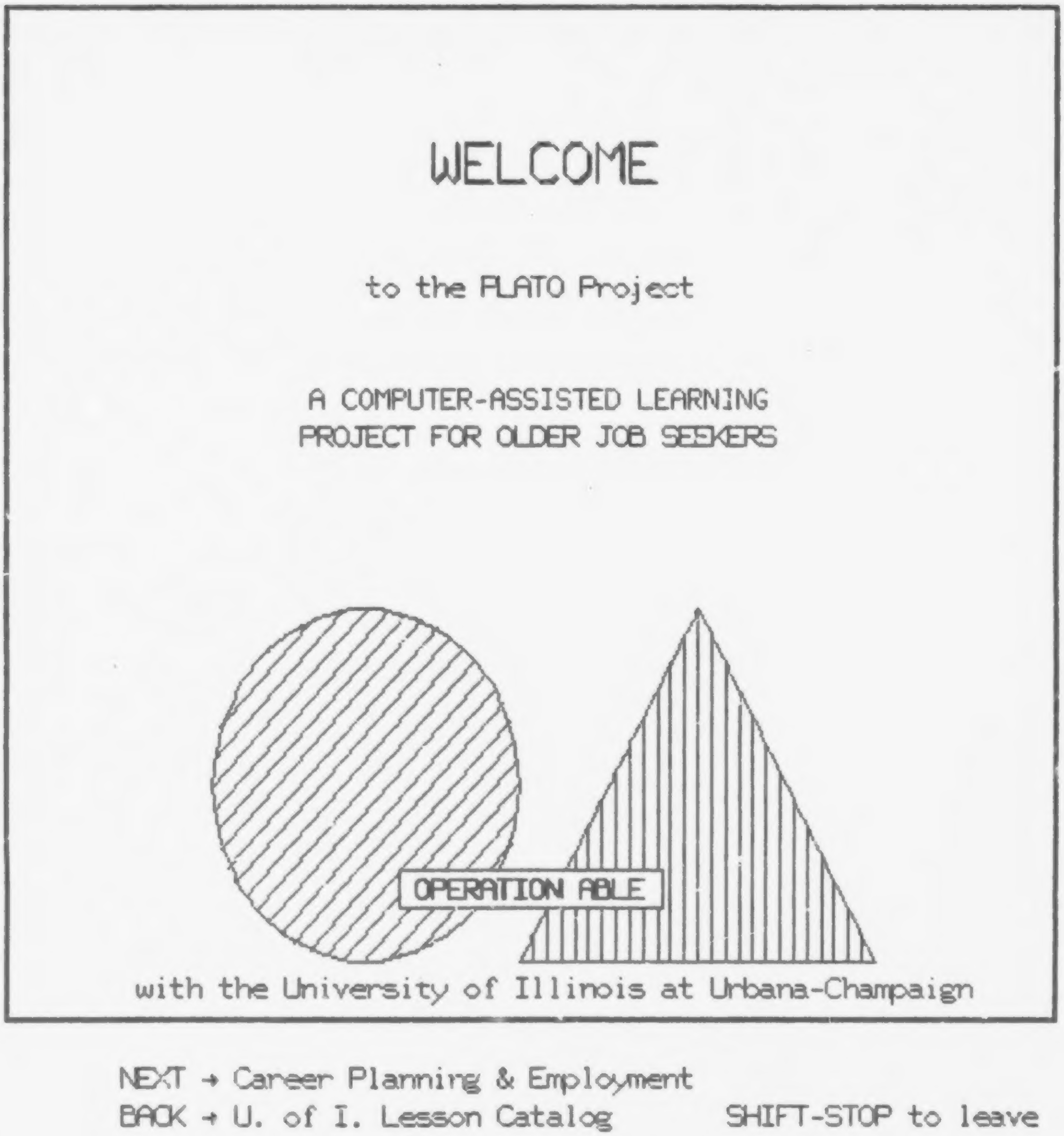
```
      PRESS A LETTER TO SEE INFORMATION ON THAT OCCUPATION.


  ____________________________________________________________
            Press      YOUR MARKED OCCUPATIONS

             _a ▶▶▶▶ SURVEYOR HELPERS
              b ▶▶▶▶ GROUNDSKEEPERS AND GARDENERS
              c ▶▶▶▶ FORK LIFT OPERATORS
              d ▶▶▶▶ FREIGHT HANDLERS









  ------------------------------------------------------------
```

APPENDIX 3

NEW LESSON DEVELOPMENT

- Screen Displays of Revised Menus
- Functional Resume Lesson
- Interviewing the Employer
- Questions You Don't Have to Answer
- Getting Along on the Job
- Where to Look for Jobs
- How to Fill Out a Job Application Form

SCREEN DISPLAYS OF REVISED MENUS



WELCOME

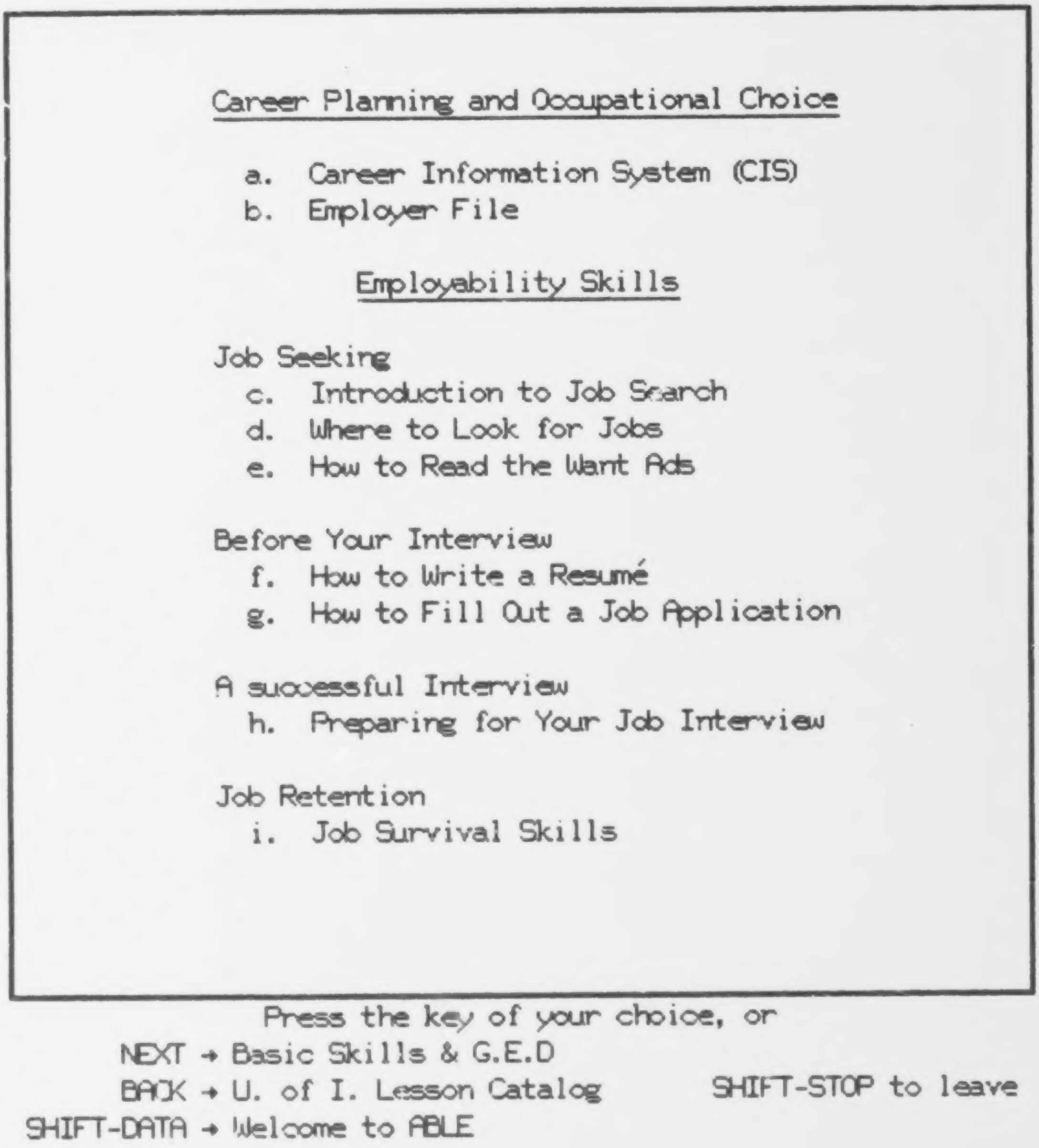
to the PLATO Project

A COMPUTER-ASSISTED LEARNING
PROJECT FOR OLDER JOB SEEKERS

OPERATION ABLE

with the University of Illinois at Urbana-Champaign

NEXT → Career Planning & Employment
BACK → U. of I. Lesson Catalog   SHIFT-STOP to leave



Career Planning and Occupational Choice

- a. Career Information System (CIS)
- b. Employer File

Employability Skills

Job Seeking
- c. Introduction to Job Search
- d. Where to Look for Jobs
- e. How to Read the Want Ads

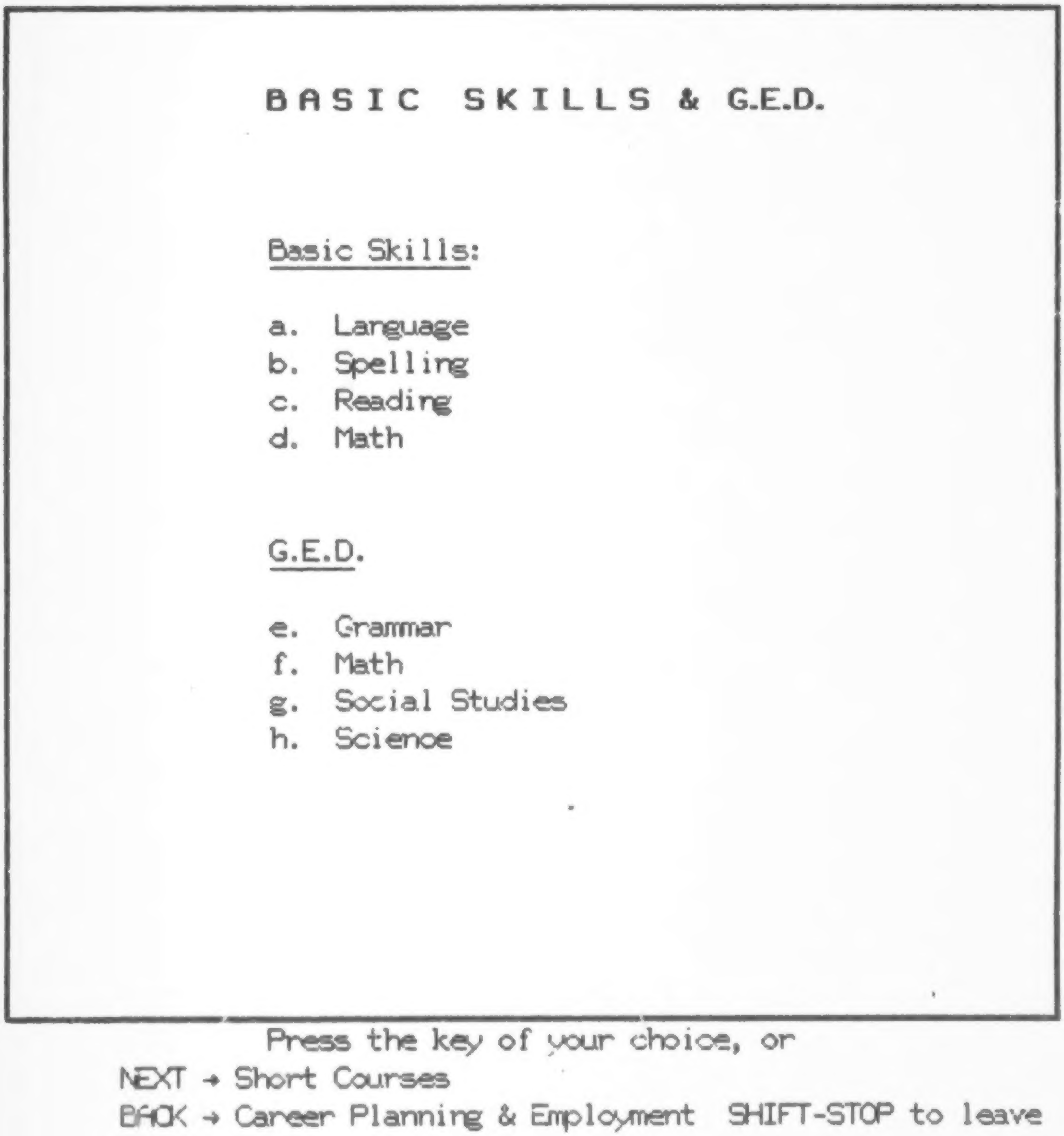
Before Your Interview
- f. How to Write a Resumé
- g. How to Fill Out a Job Application

A successful Interview
- h. Preparing for Your Job Interview

Job Retention
- i. Job Survival Skills

Press the key of your choice, or

NEXT → Basic Skills & G.E.D
BACK → U. of I. Lesson Catalog
SHIFT-STOP to leave
SHIFT-DATA → Welcome to ABLE



BASIC SKILLS & G.E.D.

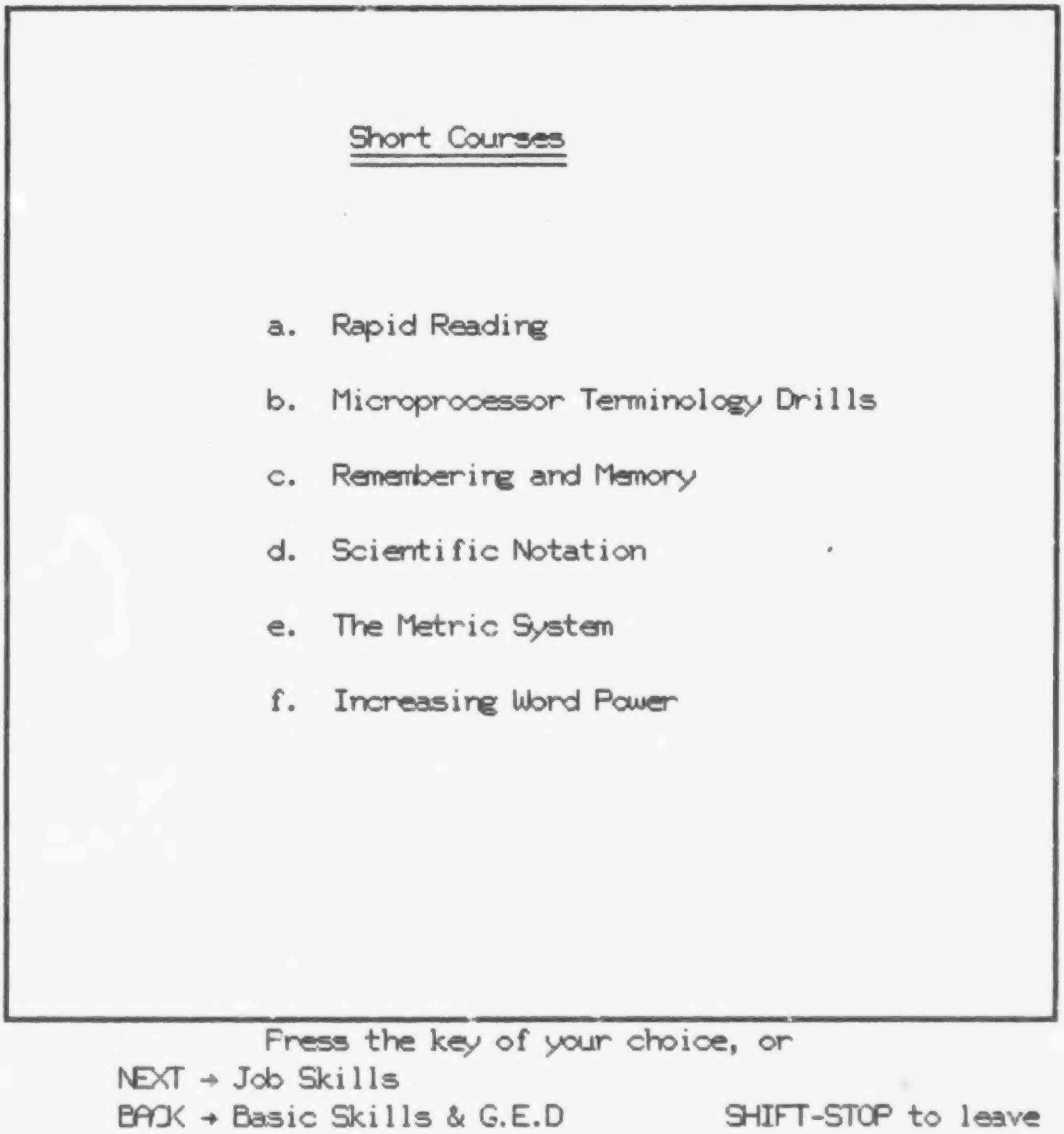
Basic Skills:

a. Language
b. Spelling
c. Reading
d. Math

G.E.D.

e. Grammar
f. Math
g. Social Studies
h. Science

Press the key of your choice, or
NEXT → Short Courses
BACK → Career Planning & Employment SHIFT-STOP to leave



Short Courses

a. Rapid Reading

b. Microprocessor Terminology Drills

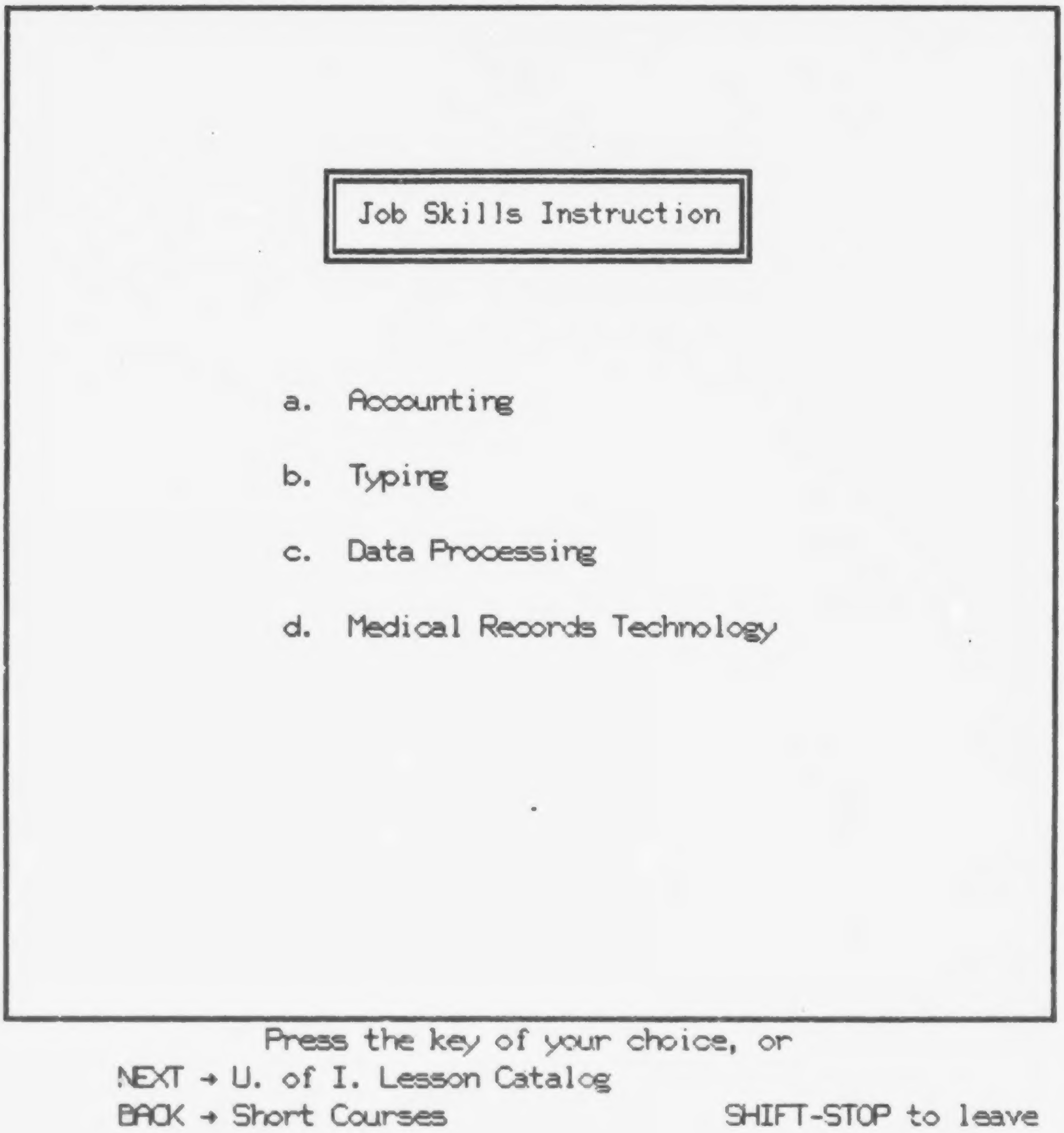
c. Remembering and Memory

d. Scientific Notation

e. The Metric System

f. Increasing Word Power

Press the key of your choice, or
NEXT → Job Skills
BACK → Basic Skills & G.E.D SHIFT-STOP to leave



Job Skills Instruction

a. Accounting

b. Typing

c. Data Processing

d. Medical Records Technology

Press the key of your choice, or
NEXT → U. of I. Lesson Catalog
BACK → Short Courses SHIFT-STOP to leave

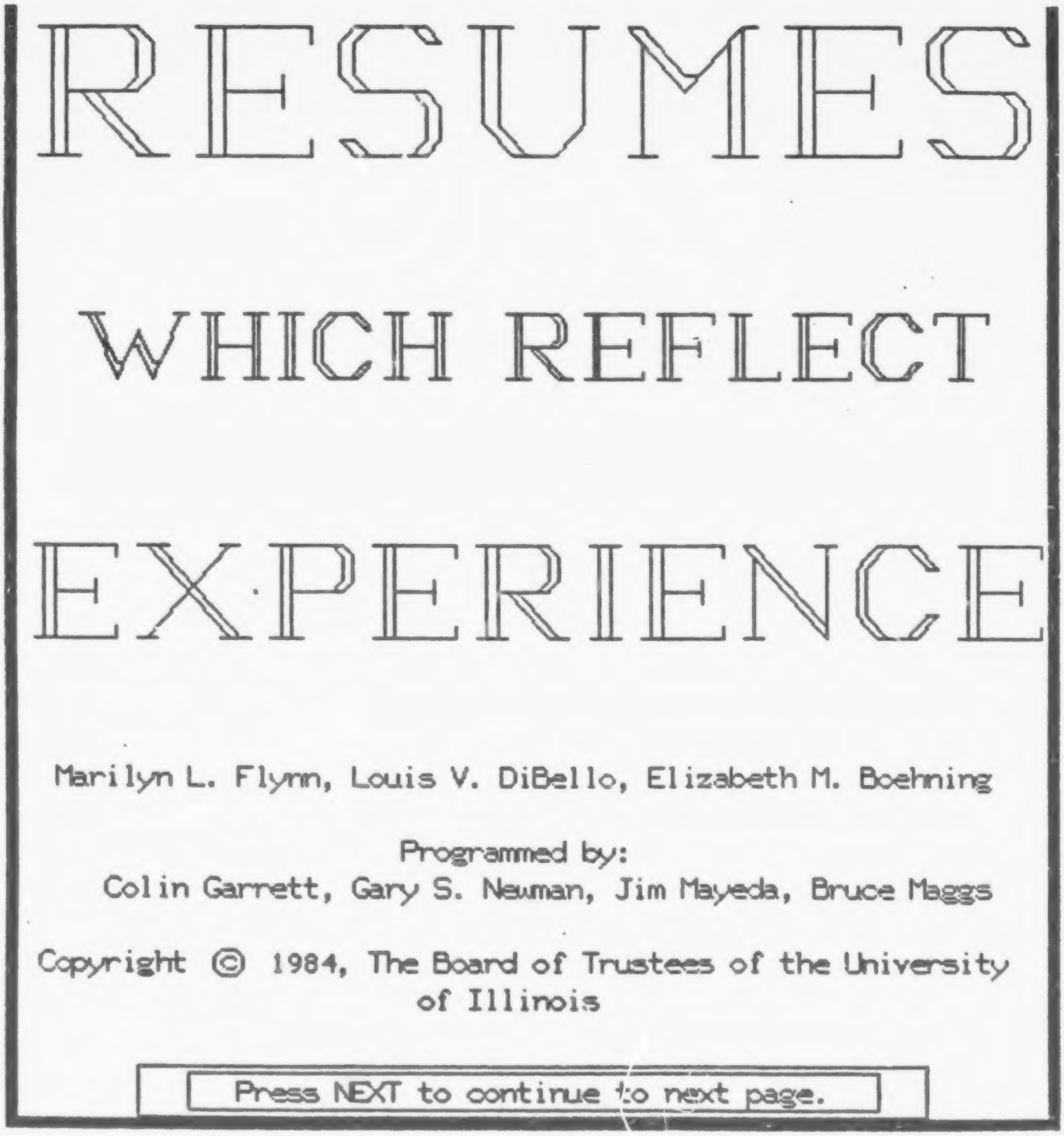
DEVELOPMENT VERSION OF THE NEW FUNCTIONAL RESUME LESSON

This is an incomplete version of a functional skills resume lesson for professional, managerial and technical workers being developed at the University of Illinois by the Plato Administrative Services Research Group.

The lesson is being designed for older workers, dislocated workers, workers changing occupations, and workers re-entering the labor force.

We would appreciate your comments and suggestions about this lesson. To do this, please make term-comments while reviewing the lesson. To make a term-comment: while holding down the shift key, press the term/ans key. At the bottom of the screen, you will be asked what term; type in "comment" and press next, and proceed to follow the on screen directions.

Press NEXT to continue to next page.



RESUMES

WHICH REFLECT

EXPERIENCE

Marilyn L. Flynn, Louis V. DiBello, Elizabeth M. Boehning

Programmed by:
Colin Garrett, Gary S. Newman, Jim Mayeda, Bruce Maggs

Copyright © 1984, The Board of Trustees of the University of Illinois

Press NEXT to continue to next page.

The objectives of this resume exercise are
to help you:

1. Understand the purpose of a functional resume;
2. Prepare a resume in context with your own experiences.
3. Prepare for the job interview by confirming who you are and what you can do;
4. Review the different elements of a resume;
5. Practice writing your resume.

Press NEXT to continue to next page.

This lesson will present examples from one of the following occupational groups.

BE SURE TO CHOOSE YOUR OWN WORK PREFERENCE

a. Management and administration.

[✓ b.] Engineering and technical fields.

c. Education and human services.

d. Life sciences, mathematics, and physical sciences.

Please choose a, b, c, or d.

Press BACK to make a different choice or
NEXT to go on to the next page

Most employment counselors believe that your resume should be revised frequently.
Why is this important?

[✓ a.] The resume should include everything an individual has done at work.

b. The resume should relate to changing job objectives.

c. Employers are likely to be impressed.

d. Revisions will help you find employment most similar to your most recent job.

Actually, the resume is a summary. It highlights your experience in relation to a job objective.

Press NEXT to continue to next page.

How can a resume help you prepare for an interview?

a. A resume explains your work history.

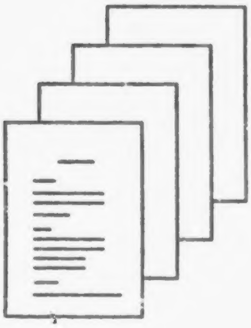
[✓ b.] A resume helps you organize your thinking about abilities and accomplishments.

Yes. A resume will help prepare you for questions that the employer will ask you in the interview. Also, remember it's people not paper that get you a job.

Press NEXT to continue to next page.

A resume also serves as a reminder to the employer of who you are.

Be sure to bring several copies of your resume and references when you go for a job interview.



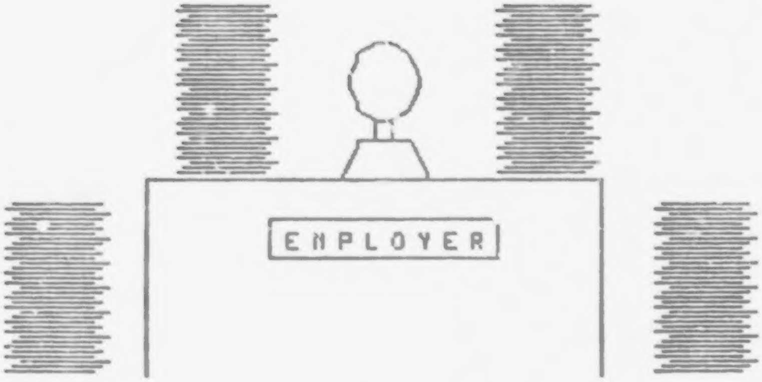
Press NEXT to continue to next page.

Most employers have very little time to look over a resume; it must be...

... well organized

... concise

... easy to read



Press NEXT to continue to next page.

- A resume should be honest and positive; it should also highlight your achievements.

- Employers don't advertise their positions with a negative tone, so why should an applicant?

- Remember: Capitalize on your strengths and use strong action words which are decisive and concrete. For example: use words like managed, coordinated, supervised, directed, etc. These words project powerful images which tend to influence how you are perceived as a prospective employee.

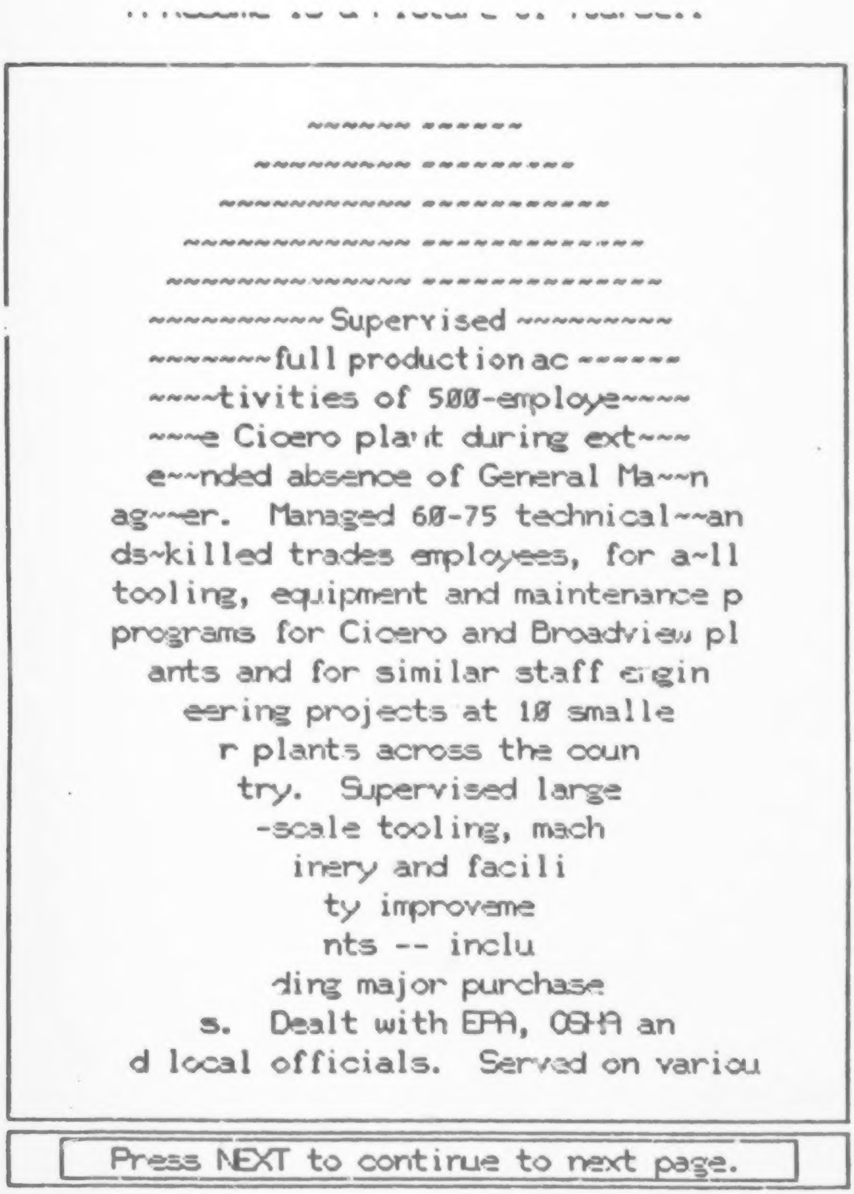
Press NEXT to continue to next page.

Your resume is a highly individualized, personal description of yourself. You should tell:

- -- Your name, address, and phone number
- -- What kind of job you want
- -- Your abilities, areas of expertise, and accomplishments
- -- Your past work experiences
- -- Your education
- -- Personal information

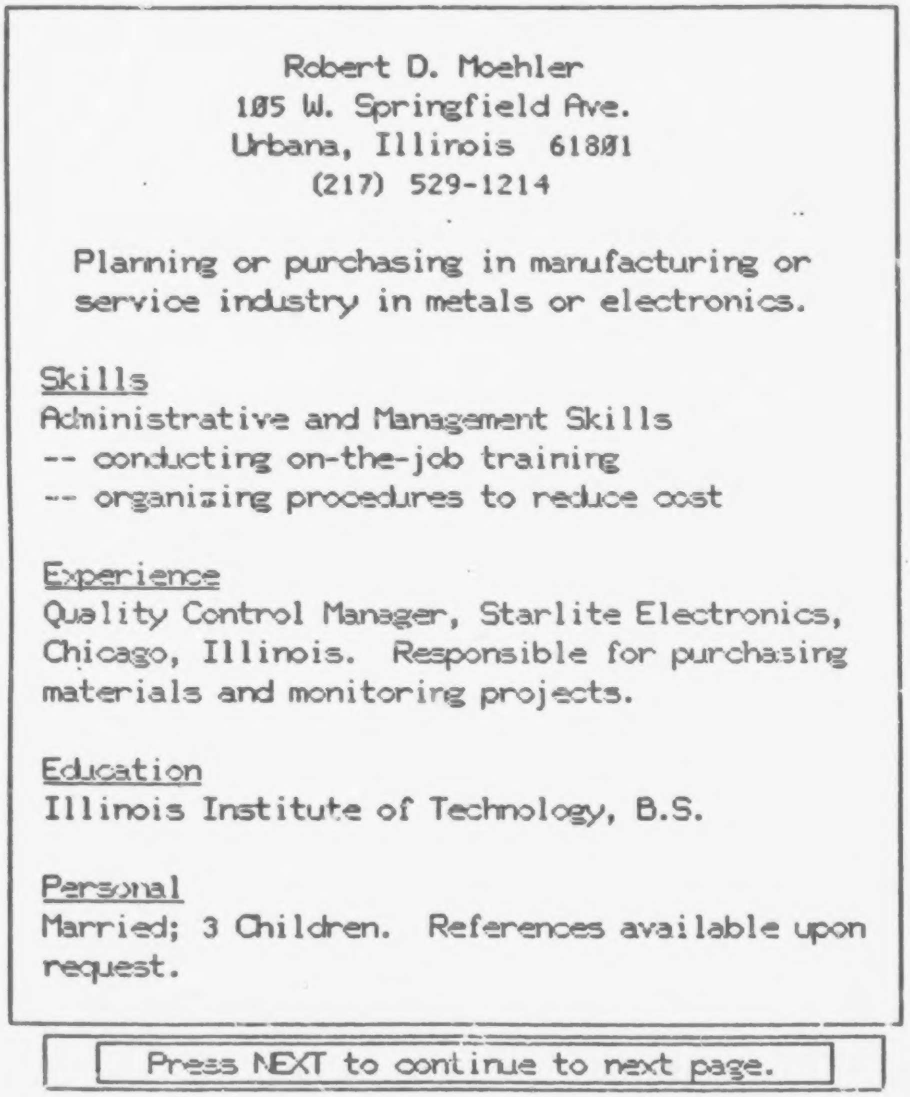
Press NEXT to continue to next page.

A Resume is a Picture of Yourself.



```
           ~~~~~~ ~~~~~~
         ~~~~~~~~~ ~~~~~~~~~
       ~~~~~~~~~~~ ~~~~~~~~~~~
      ~~~~~~~~~~~~~ ~~~~~~~~~~~~~
     ~~~~~~~~~~~~~~ ~~~~~~~~~~~~~~
    ~~~~~~~~~~~Supervised~~~~~~~~~
    ~~~~~~~~full production ac~~~~~~
    ~~~~tivities of 500-employe~~~~
    ~~~e Cicero plant during ext~~~
  e~~nded absence of General Ma~~n
 ag~~er.  Managed 60-75 technical~~an
 ds~killed trades employees, for a~ll
 tooling, equipment and maintenance p
 programs for Cicero and Broadview pl
   ants and for similar staff engin
    eering projects at 10 smalle
      r plants across the coun
        try.  Supervised large
          -scale tooling, mach
            inery and facili
              ty improveme
              nts -- inclu
            ding major purchase
        s.  Dealt with EPA, OSHA an
    d local officials.  Served on variou
```

Press NEXT to continue to next page.



Robert D. Moehler
105 W. Springfield Ave.
Urbana, Illinois 61801
(217) 529-1214

Planning or purchasing in manufacturing or service industry in metals or electronics.

Skills
Administrative and Management Skills
-- conducting on-the-job training
-- organizing procedures to reduce cost

Experience
Quality Control Manager, Starlite Electronics, Chicago, Illinois. Responsible for purchasing materials and monitoring projects.

Education
Illinois Institute of Technology, B.S.

Personal
Married; 3 Children. References available upon request.

Let's try an exercise to examine the skills involved in five previous positions you held which you enjoyed and felt proud of your accomplishments.

List five previous positions:

→ 1. engineering technician ok

→ 2.

NEXT for next line
SHIFT-NEXT for next position

[illegible]

Position Title

Chief Engineer, Research & Development,
Tellex Corporation, Suffern, N.Y., 1966
to 1976.

In charge of development and improvements for steam turbines. Initiated design of new line of gears and low cost single stage turbine as well as large steam turbine components. Planned laboratory facility, supervised laboratory personnel and field investigations which resulted in improved products.

Press NEXT to continue reading.

The job objective can take a variety of forms. It can state:

- your career goal
- the position you are looking for
- who you are, what you can do, and the position you're looking for -- your profile

Press NEXT to continue to next page.

Here is another example of a job objective as a profile, in this case highlighting the individual's accomplishments:

GENERAL SALES MANAGEMENT EXECUTIVE with over 17 years of experience in overall management, sales, administration and top governmental relations for major health care and capital medical equipment corporation. Background includes:
Accomplishment...
Accomplishment...

BACK to review last page
NEXT to go on to next page

You may also want to include a brief statement with regard to your work style or adaptive skills.

Results-oriented and creative organizer of feasible approaches to short and long-term business problems.

Press NEXT to continue to next page.

Which is the correct way to write your education?

[✓ a.] John Hopkins University, Bachelor of
Engineering, 1941
American Management Association - The Management
Course, 1960

b. American Management Association - The
Management Course, 1960
John Hopkins University, Bachelor of
Engineering, 1941

You should list your most recent training
or education first.

Press NEXT to continue to next page.

Also include under education any other training you may have received.

- courses
- seminars and workshops
- conferences and professional meetings

Press NEXT to continue to next page.

You may want to use this section to list:

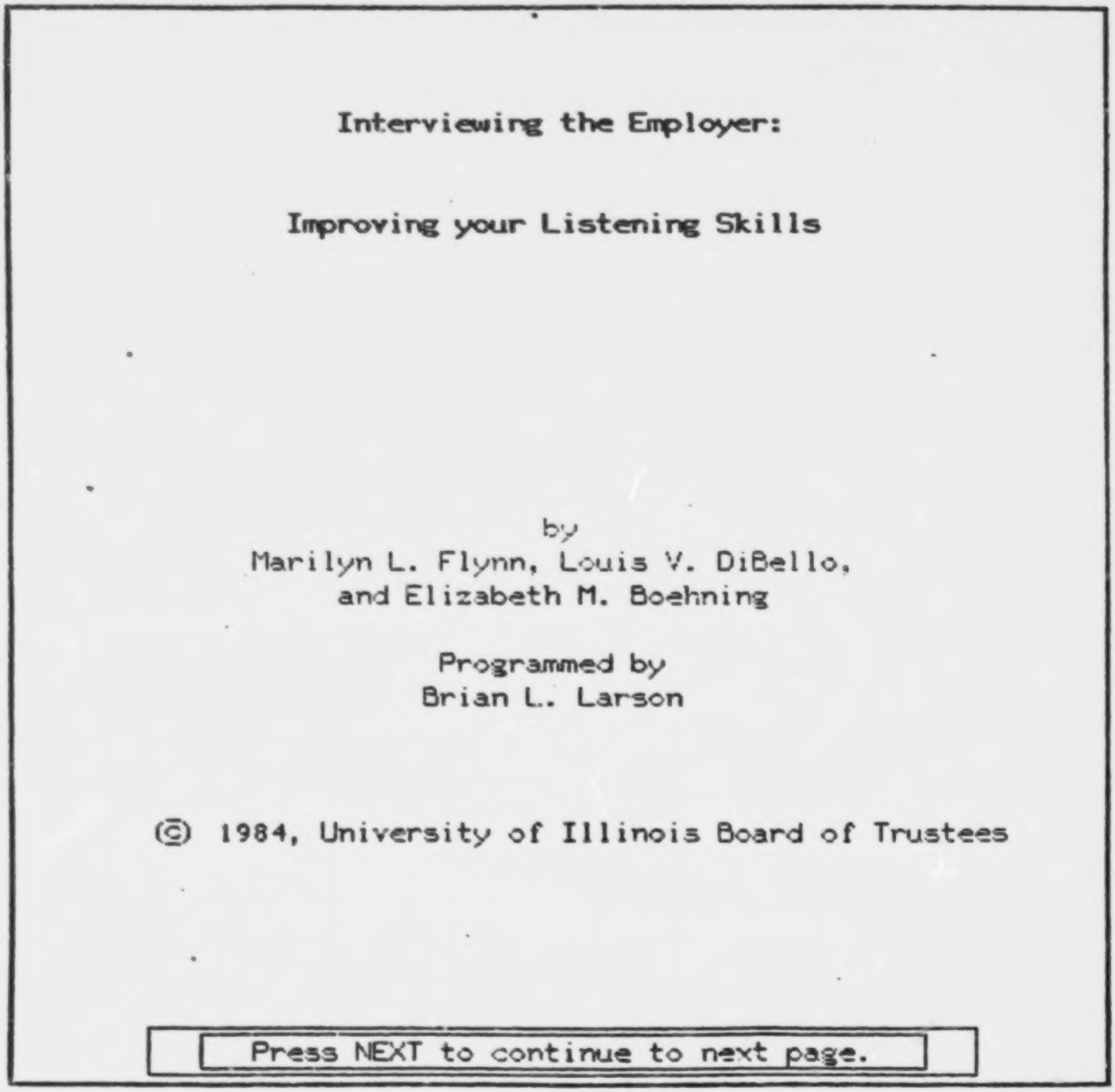
- professional affiliations, e.g. American Dental Association
- Community involvement or service, e.g. member of League of Women Voters
- Professional and community contributions, e.g. Piatt County Reacreation Commission

Would you like to have this section on your resume?

>

(Type yes or no and press NEXT.)

NEW LESSON DEVELOPMENT:
INTERVIEWING THE EMPLOYER



Interviewing the Employer:

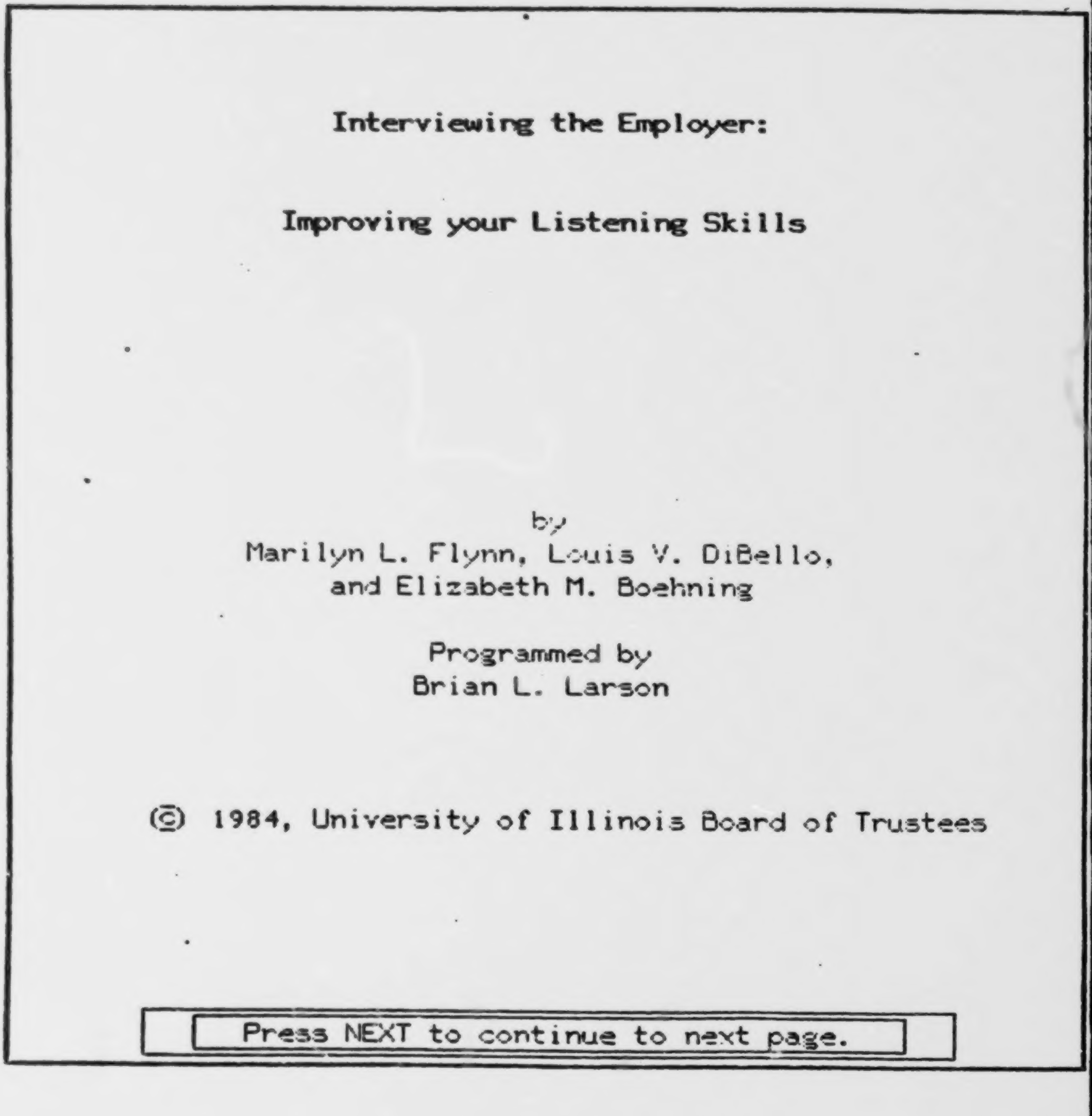
Improving your Listening Skills

by
Marilyn L. Flynn, Louis V. DiBello,
and Elizabeth M. Boehning

Programmed by
Brian L. Larson

© 1984, University of Illinois Board of Trustees

Press NEXT to continue to next page.



Interviewing the Employer:

Improving your Listening Skills

by
Marilyn L. Flynn, Louis V. DiBello,
and Elizabeth M. Boehning

Programmed by
Brian L. Larson

© 1984, University of Illinois Board of Trustees

Press NEXT to continue to next page.

In a job interview YOU can interview the employer.

Here's why you should:

1) To find out about the duties and responsibilities of the job.

2) To find out about the goals and needs of the organization.

3) To find out how the interviewer feels about you.

Press NEXT to continue to next page.

How do you interview the employer?

- Be ready to listen to the employer.
- Ask about the duties and responsibilities of the job.
- Ask about the goals and needs of the organization.
- Listen for your employer's concerns. This gives you a chance to relate your skills.

Remember: you choose where to work so listen closely to what the interviewer says.

Press NEXT to continue to next page.

Interviewing the employer means:

a. Communicating important information about ones self.

b. The right to be treated fairly, without discrimination.

c. Seeking necessary information about the job to make a good decision.

d. Listening closely to the question you are asked.

(Choose the best response and press that letter)

c

Good, this is what interviewing the employer is all about.

Press NEXT to continue to next page.

We have just looked at how you interview the employer.

Now, Let's look at some ideas about listening.

Press NEXT to continue to next page.

HOW WELL DO YOU LISTEN?

You learned to listen before you could talk.

But effective listening is a skill that can be learned and improved.

Let's begin with a short inventory of your ideas on listening.

Press NEXT to continue to next page.

Your ideas on listening

t if you think the statement is true
f if you think the statement is false

T 1 Listening and hearing are about the same.

T 2 Listening doesn't take a lot of effort.

T 3 Listening is understanding the words someone says.

T 4 The more intelligent you are the better you are at listening.

T 5 Poor listeners improve with age.

T 6 Speaking is usually more important than listening.

T 7 During any day, the average person does more talking than listening.

T 8 Listening ability is something you are born with.

T 9 Listening is a matter of being quiet and looking at the speaker.

Press NEXT to continue to next page.

Each of these statements are commonly held myths about listening.

If you marked all of these statements false, you probably have a slightly better sense of communication than most people.

If you marked any of these statements true, you may consider yourself perfectly normal.

Press NEXT to continue to next page.

You probably get a lot more feedback on how well you speak, write, read or do your job than on how well you listen.

Here are some general facts about listening:

Press NEXT to continue to next page.

FACTS ABOUT LISTENING

- Some esitmate that people at work spend 50-75% of their time listening
- People understand speech about four times faster than the rate at which it is spoken
- on the average, "pure attention span" is 5 to 25 seconds, then one tends to "jump in" and "jump out" of really listening
- Most people hear not what is actually spoken but what they want to hear or expect to hear

Press NEXT to continue to next page.

Being a good listener is difficult but everyone can improve their listening skills - Here's a description of an active listener

Press NEXT to continue to next page.

What is an active listener like?

** An active listener takes responsibility to be alive and responsive in conversation.

** An active listener tries to understand the facts and feelings they hear and observe.

** An active listener is attentive, interested, and tuned in to the other person.

Here's a question to help you think more about listening.

Press NEXT to continue to next page.

Susan is interviewing for a position as a word processor operator. She wants to find out about the duties and responsibilites of the job.

Interviewer: Do you have any questions?

Susan: Yes, I would like to find out more about the word processing system I will be working with.

What type of behavior should Susan not demonstrate as an active listener?

a. Make a deliberate effort to concentrate on what the interviewer is saying.

b. Tell the interviewer what you know about the system as soon as he/she names it by interrupting him/her.

c. Sit up in the chair and be attentive.

d. Try to understand the opinion of the employer about the word processing system.

b (Choose a,b,c or d)

Good. Don't INTERUPT THE INTERVIEWER. Be patient and listen; wait until he/she finishes speaking.

Press NEXT to continue to next page.

To find out about the duties and responsiblities of a job, in an interview, you need to do some preperation.

↔ Know what job or position you are interviewing for.

↔ try to get a job description for the job you want: you can do this by:

- asking the employer
- using employement reference materials
- using PLATO Career Information System (CIS)

↔ formulate some specific questions about the duties and responsibilites of the job.

Press NEXT to continue to next page.

EXAMPLE

Jim is interviewing for a job as a truck driver transporting light items. Jim as found out about the general duties and responsibilities of the job but he wants to know about this particular job.

Jim: How will I recieve delivery instructions?

Interviewer: That's an important point. We've recently changed our procedure. You'll be in radio contact with the delivery supervisor during the day.

ACTIVE LISTENER'S RESPONSE	POOR LISTENER'S RESPONSE
Will I also report to the delivery supervisor about goods delivered and charges collected?	Oh...How will I communicate with the delivery supervisor?

Press NEXT to continue reading.

EXAMPLE

Jim is interviewing for a job as a truck driver transporting light items. Jim as found out about the general duties and responsibilities of the job but he wants to know about this particular job.

Jim listened attentively. He followed up with a more specific question about duties and responsibilites.

ACTIVE LISTENER'S RESPONSE	POOR LISTENER'S RESPONSE
Will I also report to the delivery supervisor about goods delivered and charges collected?	Oh...How will I communicate with the delivery supervisor?

Press NEXT to continue to next page.

Tim is interviewing for a job as a security guard. He wants to know more about the duties and responsibilities of this job.

Interviewer: Essentially in this job you'll be patrolling the main office building and the grounds. (long pause)

What would be the best way for Tim to respond?

a. Don't do anything: let interviewer ask the next question.

b. Say: Have there been any problems in the past?

c. Say: Oh...I realize that. What are my other duties and responsibilities?

d. Say: What does patrolling mean in this job?

d (Choose a,b,c or d)

Good. Tim carefully listened to the interviewer and responded to the information he heard.

Press NEXT to continue to next page.

Let's review -

Interviewing the employer about the duties and responsibilites of a job involves active listening.

What principles does it involve?

Press NEXT to continue to next page.

We have just looked at how to find out about the duties and responsibilites of a job.

Now, Let's look at how to find out about the goals and needs of the employer.

Here's a question involving a sensitive issue.

Press NEXT to continue to next page.

The objective of this lesson is to review:

1) How you interview the employer

2) Why listening is so important

3) Some tips on how to apply the principles of active listening

Press NEXT to continue to next page.

Fred was laid off two months ago. He has been looking for a job since then.

Interviewer: In our company we're looking for motivated and hard-working people. Mr. Jasek, looking at your resume, I see you were last employed two months ago. What have you been doing since?

Fred: Uh...I was laid off...the company wasn't really fair to me.

What happened in this scenario?

a. Fred answered the interviewer's question.

b. The interviewer's question wasn't fair.

c. Fred handled a sensitive issue from his past well.

d. Fred wasn't thinking about a company's needs.

d (Choose a,b,c or d)

Good. Fred wasn't thinking of the needs of the company. He wasn't being an active listener and ended up saying something negative about himself. Press NEXT to continue reading.

Fred was laid off two months ago. He has been looking for a job since then.

Interviewer: In our company we're looking for motivated and hard-working people. Mr. Jasek, looking at your resume, I see you were last employed two months ago. What have you been doing since?

Fred: Uh...I was laid off...the company wasn't really fair to me.

What happened in this scenario?

a. Fred answered the interviewer's question.

b. The interviewer's question wasn't fair.

c. Fred handled a sensitive issue from his past well.

d. Fred wasn't thinking about a company's needs.

How can you find out about the goals and needs of the employer?

Press NEXT to continue to next page.

We have just looked at how to find out about the duties and responsibilites of a job.

Now, Let's look at how to find out about the goals and needs of the employer.

Here's a question involving a sensitive issue.

Press NEXT to continue to next page.

Interviewing the employer means finding aout about the goals and needs of the organization first. You need to get prepared to ask some good questions.

♦ FIND OUT WHAT THE ORGANIZATION DOES. You can do this by:
  - looking back at your job leads list.
  - reasearch the organization by using employer reference materiasl; many are available at the job club or your local library.
  - talk to someone who works there.

♦ Brainstrom about the needs or problems that the organization might have.

♦ Focus on the needs and goals of person who has the power to hire in the organization.

Press NEXT to continue to next page.

Tony is interviewing for a position as a gas station attendant supervisor. The Interviewer has stressed the importance of being able to supervise the other attendants. Tony has been employed in several different service stations during his working life.

Interviewer: It seems like you've jumped around from station to station, is that true?

ACTIVE LISTENER'S RESPONSE	POOR LISTENER'S RESPONSE
Actually the variety of experiences I have had has helped me improve my supervisory skills.	Well that's not really true...I have very good recomendations from all of my former employers.

Press NEXT to continue reading.

Tony is interviewing for a position as a gas station attendant supervisor. The Interviewer has stressed the importance of being able to supervise the other attendants. Tony has been employed in several different service stations during his working life.

Tony is being defensive and not thinking of the employer's needs.

ACTIVE LISTENER'S RESPONSE

Actually the variety of experiences I have had has helped me improve my supervisory skills.

POOR LISTENER'S RESPONSE

Well that's not really true...I have very good recomendations from all of my former employers.

Press NEXT to continue reading.

Interviewing the employer to find out the goals and needs of the organization is important.

Why?

Listening for the needs or problems of the employer will give you a chance to relate your skills.

Here is a question for you.

Press NEXT to continue to next page.

Marianne is interviewing for a position as a social service aid, providing casework to older people in their homes.

Interviewer: Marianne, your resume doesn't mention any previous social service experience why do you think you're qualified for this job?

What is the best response Marianne could give?

a. I have been active as a church volunteer. I organized programs and visited and counseled many of our members.

b. I believe i'm qualified because of my exlusive experience in office work.

c. I'm qualified...I passed the civil service test.

d. That's true, I don't have any social service experience.

> c (Choose a,b,c or d)

This partially answers the intervewer's question. Marianne could probably state exactly why she's qualified for the tasks involved in the job. Try another answer.

Let's Review -

Interviewing the employer about the goals and needs involves active listening.

What principles does it involve?

Press NEXT to continue to next page.

Interviewing the employer about the goals and needs of the organization involves:

- listening for what the goals of the organization are
- listening for the problems the employer may discuss which will give you a chance to relate your skills.

Be an active listener:

CONCENTRATE - listen carefully to what the employer says.

PARTICIPATE - sit up and listen; tell the employer about your skills that will help the organization.

LISTEN FOR FEELINGS - Let the employer know you understand his/her point of view.

Press NEXT to continue to next page.

We just looked at:

How to find out about the
goals and needs of the
employer; and

How to relate your skills
to the needs or problems
of the employer

Now, Let's look at how to
listen for your employer's
feelings about you and how
to relate your skills.

Here's a question commonly
asked in an interview.

Press NEXT to continue to next page.

Interviewer: Carol, tell me about yourself.

Carol: Well, I've lived in this town for ten years. I have two wonderful children.

Interviewer: (looking bored) umm....

What is the interviewer communicating?

a. The interviewer is interested in Carol

b. The interviewer is wondering why Carol doesn't mention her work skills.

c. The interviewer doesn't know how to ask questions.

d. The interviewer is in a rush.

> d (Choose a,b,c or d)

The interviewer may be in a rush but he/she wants to know about your work expericne and skills.
Try another answer.

The interviewer will tell you how they feel about by their nonverbal and verbal communications.

How does an interviewer do this?

- do they look bored, nervous, happy, impatient?
- do they respond positively to what you say? are they attentive? do they show interest in what you say?
- do they change the subject?
- are they defnsive? do they show signs of resentment or mistrust?

Press NEXT to continue to next page.

Sam is interviewing for a job as a fry cook in a fast food restaurant.

Interviewer: Sam, our cooks need to work under presssure, be fast, and do a good job. Do you Think you can do this?

Sam: Well...uh...sure.

Interviewer: Oh? What makes you say that?

ACTIVE LISTENERS RESPONSE	POOR LISTENERS RESPONSE
I've worked at other fast food restaurants. And I know the pace can be rough...but I've succeded in the past!	Well, I really think so. Look, I'm fast. Why do you think I can't do the job?

Press NEXT to continue reading.

Sam is interviewing for a job as a fry cook in a fast food restaurant.

Sam acknowledges the interviewers doubts and tells the interviewer about his skills and abilities.

ACTIVE LISTENERS RESPONSE

I've worked at other fast food restaurants. And I know the pace can be rough...but I've succeded in the past!

POOR LISTENERS RESPONSE

Well, I really think so. Look, I'm fast. Why do you think I can't do the job?

Press NEXT to continue to next page.

Wanda is interviewing for a job as a shipping clerk

Interviewer: Wanda, this is a very demanding job. I'm not sure a woman can handle it. Well what hours would you be available?

What would be the best way for Wanda to answer this question?

a. Well.. the want ad didn't say you wanted a man.

b. I can work the day shift or the night shift whichever is needed.

c. I have worked in other demanding jobs, including jobs where i've supervised men. In terms of the duties I can work. I am avaialbe for the day or night shift.

d. I've worked as a supervisor in a processing plant with men and women. I've been able to give directions to.men without any problems.

≫ d (Choose a,b,c or d)

Wanda did respond to the interviewer's doubt about handling the job, but failed to answer the question about what hours she could work.
Try another answer.

Let's review.-

Listening for how the interviewer feels about you involves active listening.

What principles does it involve?

Press NEXT to continue to next page.

Interviewing the employer includes listening to how the interviewer feels about you as a ptential employee.

Be an active listener:

OBSERVE	Look at how the employer reacts nonverbally and watch for reactions.
LISTEN FOR FEELINGS	Listen for the interviewer's point of view and his/her doubts and prejudices.
BE ON ALERT FOR YOUR BIASES	Be objective and open minded; don't be defensive

Press NEXT to continue to next page.

Remember: Interviewing the employer means being an active listener.

CONCENTRATE

PARTICIPATE

OBSERVE

GIVE FEEDBACK

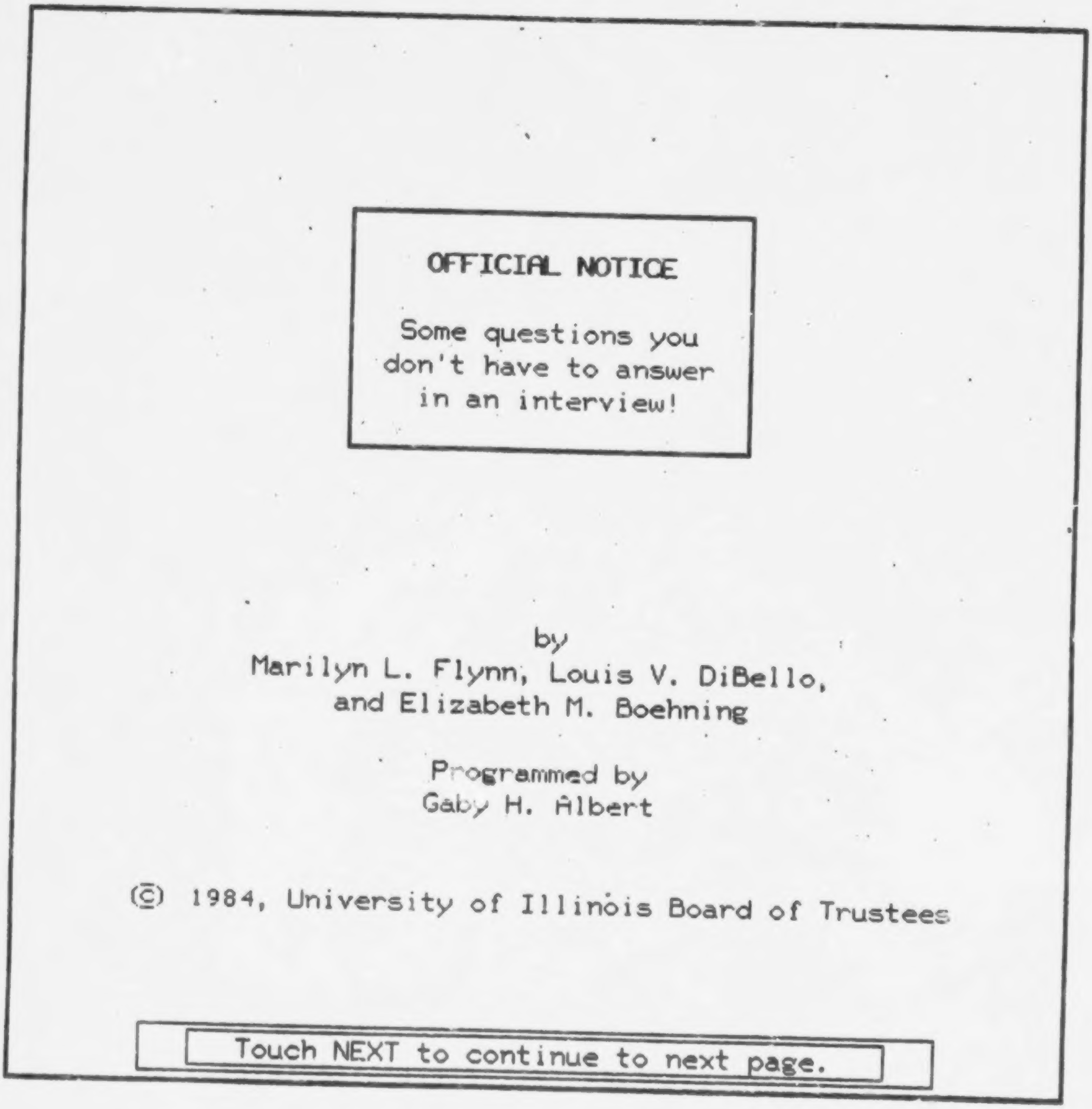
LISTEN FOR FEELINGS

BE ON ALERT FOR YOUR BIASES

You have completed this lesson.
Press NEXT now to leave.

New Lesson Development - Sample Screen Display

Lesson: Questions You Don't Have to Answer



OFFICIAL NOTICE

Some questions you
don't have to answer
in an interview!

by
Marilyn L. Flynn, Louis V. DiBello,
and Elizabeth M. Boehning

Programmed by
Gaby H. Albert

© 1984, University of Illinois Board of Trustees

Touch NEXT to continue to next page.

Mildred is interviewing for a job as a bank teller. Here is the want ad she saw in the newspaper:

BANK TELLERS Liberty National Bank, min 2 yrs exp, major medical, dental, pension, HS grad. 678-9173.

Interviewer

Mildred, do you have a high school degree?

An interviewer CAN ask this question because the qualification is truly required for the job.

Touch NEXT to continue to next page.

The interviewer asks:

Do you have any health problems?

Is this question allowed?

Touch or type your answer.

YES

Right. An interviewer CAN ask about a physical or mental condition that has to do with how well you can do the job. But an interviewer is NOT ALLOWED to ask GENERAL questions about your physical and mental condition.

NO

What can you do if you are asked this question?

Touch NEXT to continue.

What YOU can do if you're asked this question.

"Do you have any health problems?"

Which answer would YOU choose if YOU were asked?
Touch or type the number of your choice.

1 Do you mean "will my health interfere with me doing a good job"?

[✓ 2] Yes, I have a few health problems.

3 I think this question doesn't apply to this job, but I do have a few health problems.

4 I've followed the rule that an apple a day keeps the doctor away.

Careful. This answer might hurt your chances to get the job even though it won't affect how well you can do the work. Try another answer.

New Lesson Development - Sample Screen Displays

Lesson: Getting Along on the Job

Getting Along on the Job

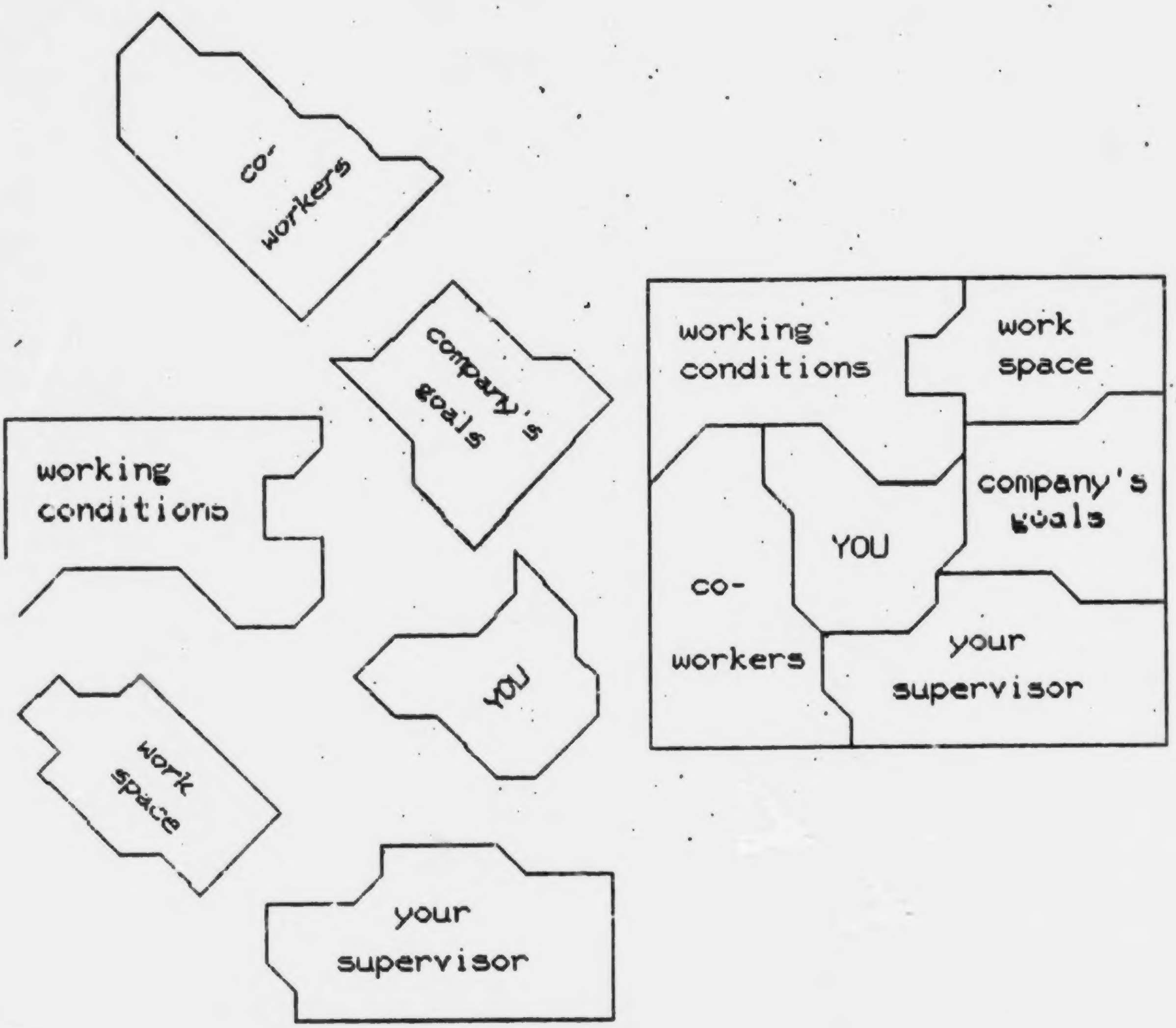
Marilyn L. Flynn, Louis V. Dibello,
Eveline E. Jacobs, and Elizabeth M. Boehning

Programmed by David Goldberg

© 1984 University of Illinios Board of Trustees

NEXT to continue

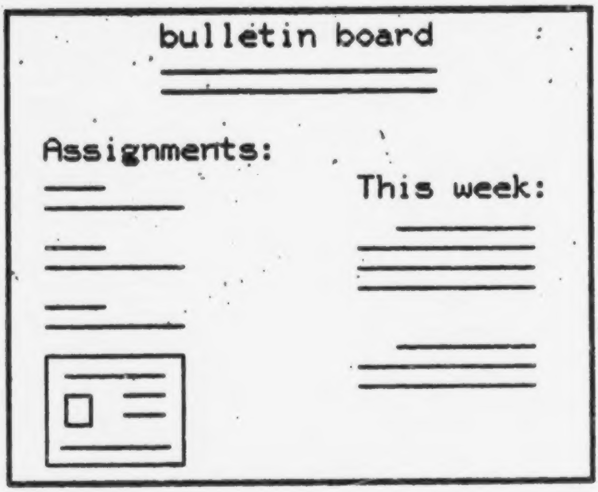
marian, your job has many parts, which fit together.


co-workers
company's goals
working conditions
YOU
work space
your supervisor
working conditions
work space
YOU
company's goals
co-workers
your supervisor

NEXT to continue

If changes are made, how will Carol know?

Almost every job has a bulletin board, where notices are posted. Carol's supervisor might tell her about changes made, but she should read the bulletin board each day.

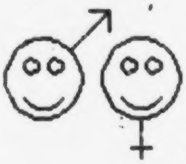

bulletin board
Assignments:
This week:

NEXT to continue

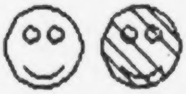
Feeling good about your co-workers and feeling that they accept you are important. Sometimes, only small differences come up between two persons, but other times there may be more troublesome problems. Let's look at a few examples.

What if most (or all) of the other workers in your group are:

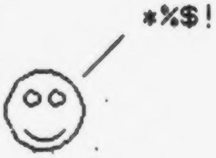
1. Of the opposite sex?



2. Of a different race?



3. Of a different language group?

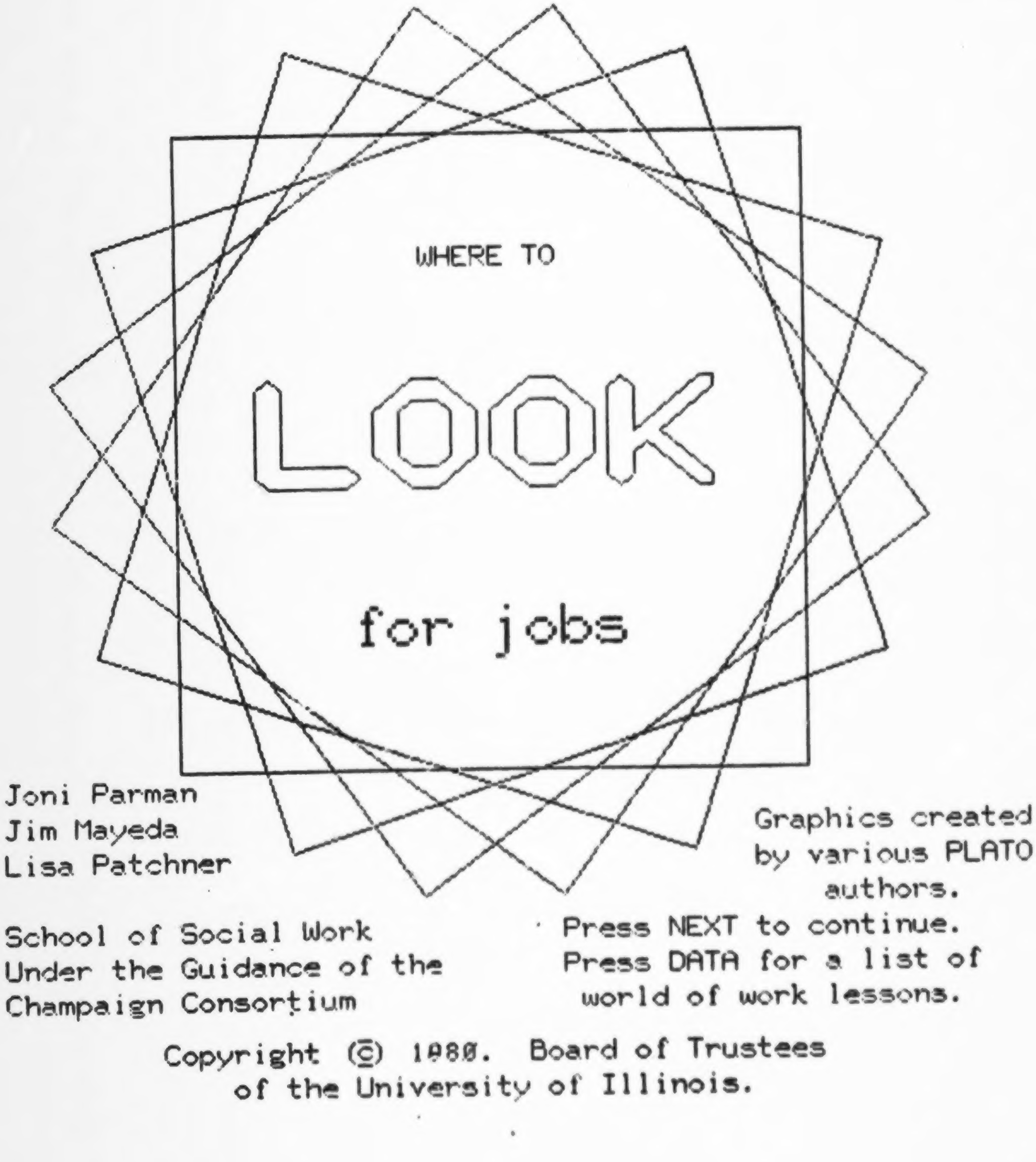


4. Much older than you?

5. Much younger than you?

NEXT to continue

SELECTIONS FROM REVISED VERSION OF
"WHERE TO LOOK FOR JOBS"



WHERE TO

LOOK

for jobs

Joni Parman
Jim Mayeda
Lisa Patchner

Graphics created
by various PLATO
authors.

School of Social Work
Under the Guidance of the
Champaign Consortium

Press NEXT to continue.
Press DATA for a list of
world of work lessons.

Copyright © 1980. Board of Trustees
of the University of Illinois.

The purpose of this lesson is to go over common places of where to look for job openings.

What do you want PLATO to call you? Bonnie ok

(Type in your first name, and then press NEXT.)

Nice to meet you, Bonnie!

Press NEXT to go on to the next page.

Hello, Bonnie! Have you ever looked
for a job before?

YES

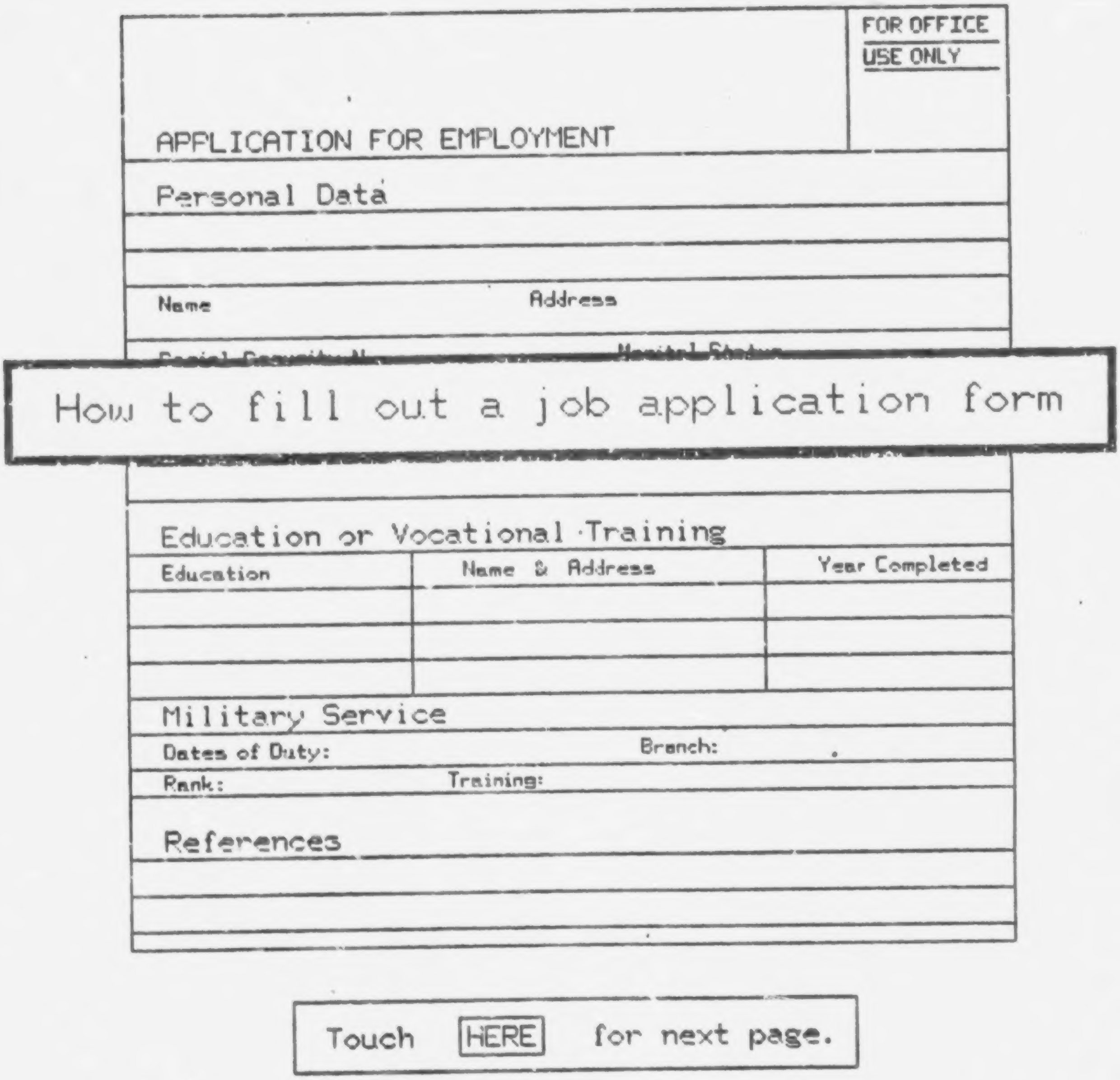
NO

(Touch or type your answer)

Good! You already know some of the places you can look. This lesson will review what you know and give you more ideas.

Press NEXT to go on to the next page.

SELECTIONS FROM REVISED VERSION OF
HOW TO FILL OUT A JOB APPLICATION FORM



FOR OFFICE USE ONLY

APPLICATION FOR EMPLOYMENT

Personal Data

Name Address

Social Security N Marital Status

How to fill out a job application form

Education or Vocational Training

Education	Name & Address	Year Completed

Military Service

Dates of Duty: Branch:

Rank: Training:

References

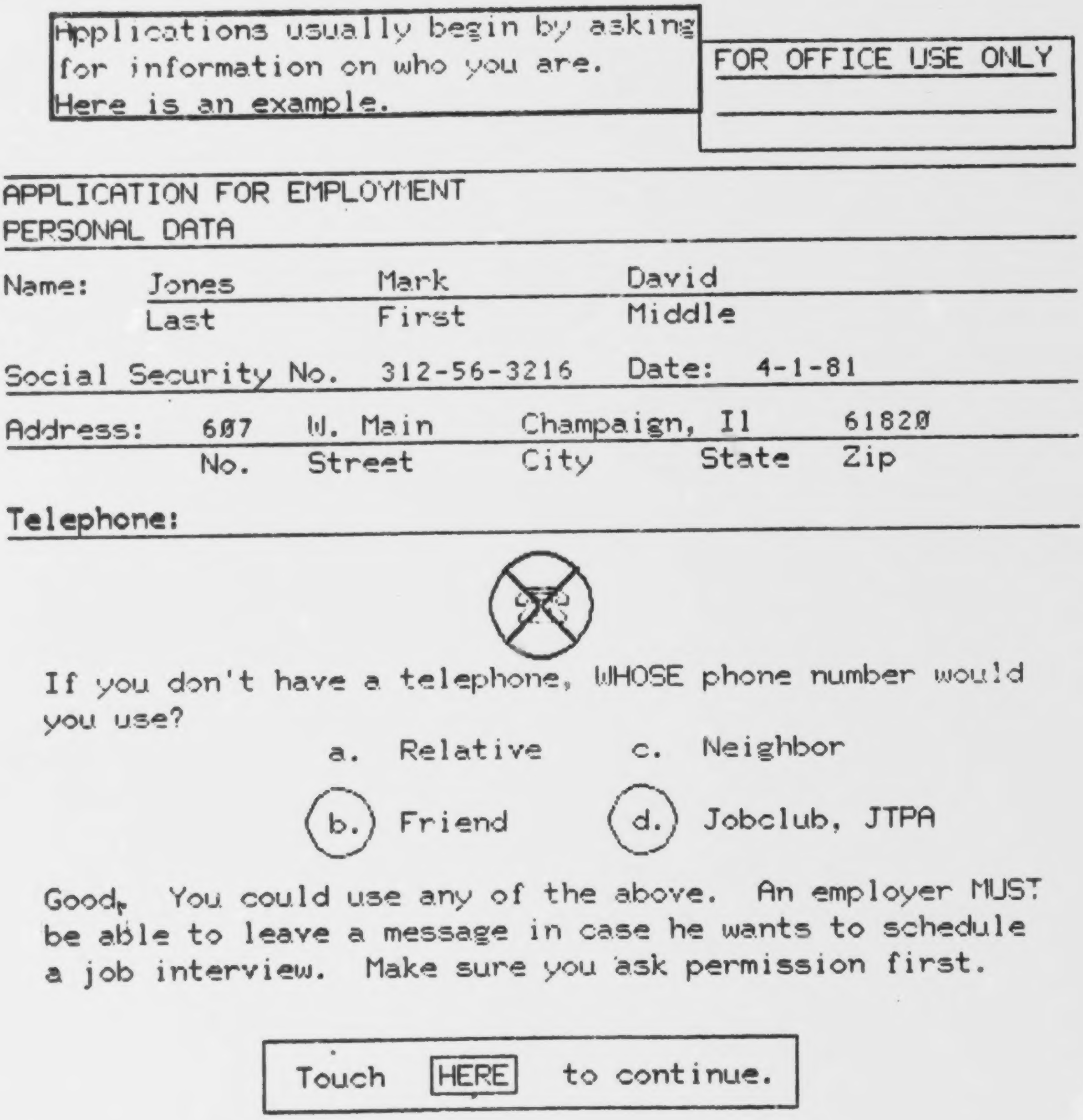
Touch HERE for next page.

Bb, have you ever filled out a job application before?

Yes

If you remember, you had to fill out an application to get a job interview. An example of a job application is on the next page.

Touch HERE for next page.



Applications usually begin by asking
for information on who you are.
Here is an example.

FOR OFFICE USE ONLY

APPLICATION FOR EMPLOYMENT
PERSONAL DATA

Name: Jones Mark David
Last First Middle

Social Security No. 312-56-3216 Date: 4-1-81

Address: 607 W. Main Champaign, Il 61820
No. Street City State Zip

Telephone:

If you don't have a telephone, WHOSE phone number would you use?

a. Relative
c. Neighbor
[✓ b.] Friend
[✓ d.] Jobclub, JTPA

Good. You could use any of the above. An employer MUST be able to leave a message in case he wants to schedule a job interview. Make sure you ask permission first.

Touch HERE to continue.

Are you a citizen of the U.S.A.?

How would you answer this question?

No

A work permit is required for most non-citizens.
Be sure to find out if you need a work permit.

Touch HERE for next page.

The job application will ask:

During the past 7 years, have you ever been convicted of a crime excluding misdemeanors?

How would you answer this if you had a criminal record?

☐ Yes

"Don't call us, we will call you."

Instead,
leave the question unanswered, but draw a line through the space or write no comment to show your employer you have not overlooked the question.

Touch **HERE** for next page.

This next section asks for information on your Education and Vocational Training Experiences.

Are you 50 years or older?

Yes

Remember: You do not have to fill in the dates of graduation on a job application.

Touch HERE for next page.

How should you start filling out your work history?

a. Begin with the first job you ever had and work your way up to your present job.

[✓ b.] Begin with your present or most recent job and work backwards from there.

b ok

Good! You begin with your most recent job.

Touch HERE for next page.

Several good answers to reasons for leaving are:

- seasonal job
- found job more in line with my interests
- would be happy to explain
- went for a higher paying job
- went back to school to further my education
- moved to new location
- company went out of business

Touch HERE to continue.

APPENDIX 4

EXAMPLES OF ON-LINE SUGGESTIONS BY STAFF AND CLIENTS THROUGH COMPUTER CONFERENCING AND ELECTRONIC MAIL FOR LESSON REVISION

SUPPLEMENTARY MATERIALS FOR A JOB SEARCH ASSISTANCE PROGRAM AT THE SENIOR FEDERATION
MINNEAPOLIS, MINNESOTA

Prepared by
Marilyn L. Flynn, Ph.D.
and
Louis V. DiBello, Ph.D.
University of Illinois at
Urbana-Champaign

September, 1984

DHHS Grant Award #90-AD-009101
Project Director
Shirley Brussell
Operation ABLE
36 S. Wabash Avenue
Chicago, Illinois

ACKNOWLEDGEMENTS

Many of the forms which are recommended in these two volumes have been taken or adapted from materials used by the New England Institute, Bangor, Maine; Operation ABLE, Chicago, Illinois; and the Neighborhood Progress Administration at the Waxter Senior Center, Baltimore, Maryland.

TABLE OF CONTENTS

OVERVIEW

Making Job Search Assistance Work 1
Tips about Content 2
Questions to Consider 2
The Work Adjustment Hierarchy 3

GETTING STARTED

Introduction - Getting Started 9
Checklist 10
Guidelines for Initial Meeting 11
Describing Programs and Stating Expectations 12
Program Structure Planning Sheet 14
Client Handout - Outline of Program Content 15
Client Handout - Notebook Contents 17
Client Handout - Program Benefits 18
Client Handout - Program Recognition 19
Client Handout - Program Expectations 20
Client/Counselor Contracts 21
Examples of Contracts 22
Contacts with Families 25
Example of Letter to Family 26
Breaking the Ice 27
Examples of "Icebreakers" - Finders 28
Example of Icebreaker - Showing Personalities 31
Example of Icebreaker - Interviewing for Introductions 33
Example of Icebreaker - Who Are You? 35
Example of Icebreaker - Philosophy of Work 37

TOPIC ONE: YOU CAN SUCCEED!

Objectives 39
The Challenge of Job Seeking 40
Thinking about Health 43
Relevant Computer Lessons 44

TOPIC TWO: GETTING READY FOR THE RIGHT KIND OF WORK

Objectives 55
Job Targets 56
Expanding Occupational Alternatives 58
Researching An Employer 62
Your Temperament and Your Work 63
Sources of Job Information 64
PLATO Lessons 65

TABLE OF CONTENTS, continued

TOPIC THREE: PUTTING YOURSELF IN WRITING
Objectives 74
Resume Preparation 75
Using References 88
Writing Cover Letters 89
PLATO Lessons 93

TOPIC FOUR: FINDING INTERVIEW OPPORTUNITIES
Objectives 107
Personal Review of Job Search Techniques
The Open Job Market
The Hidden Job Market
Preparing for Your Interview 120

TOPIC FIVE: SUCCEEDING IN YOUR JOB INTERVIEW
Objectives 126
Practicing Interview Skills 127
How to Know Your Interviewer -- Styles Common Questions 129
Appropriate Dress, Manner, Voice 140

TOPIC SIX: RETAINING YOUR JOB AND DEVELOPING
Objectives 143
Giving and Taking Supervision 144
Related PLATO Lessons 146

EVALUATION
Evaluating Client Progress 152
NPA/VI/ABLE Project Initial Client Assessment Form 153
NPA/VI/ABLE Project Follow-up Interview Form 156
PLATO Daily Log 162
Supplementary Assessment Form 163
Client Competencies Checklists 164

OVERVIEW

MAKING JOB SEARCH ASSISTANCE WORK

No matter how your job search assistance program is structured, there are five elements which you should be sure to include:

(1) Research shows that the more interviews an individual holds with potential employers, the more likely an individual is to find employment. Set daily, weekly, and monthly targets. Help your client monitor achievement of these targets.

(2) Research shows that job-seekers are more successful when they have good labor market information and understand how to find potential employers.

(3) Research shows that learning interview skills and practice in using these skills (through role-playing, videotapes, computer-assisted instruction, and "trail runs") improves the likelihood that a client will receive job offers as a result of meeting with potential employers.

(4) Research shows that a caring, supportive atmosphere, which recognizes that job seeking can be discouraging, improves program retention rates and increases client motivation.

(5) Research shows that direct efforts to change behavior of clients can be effective and results in improved job-seeking activity.

(6) All successful models for job search assistance emphasize that job-seeking is a full-time job itself, to be worked at every day, five days a week.

TIPS ABOUT CONTENT IN YOUR JOB SEARCH ASSISTANCE PROGRAM

In designing your program, try to include the following content and services:

1. Teach specific job search skills such as telephone requests for interviews; resume/job application preparation; improvements in voice, manner, and personal appearance; and interview follow-up teachniques.
2. Set a schedule for clients to help ensure full-time job-seeking activity.
3. Explain the "hidden" job market and how to find leads for unadvertised positions.
4. Offer secretarial, mail and copying services.
5. Pay participants a subsidy for transportation and/or meals where low income is known or suspected.
6. Create a positive, enthusiastic atmosphere in the program at all times.

QUESTIONS TO CONSIDER IN DESIGNING YOUR JOB SEARCH ASSISTANCE PROGRAM

Will you emphasize group process and discussion or a more lecture-oriented approach? In either case, be sure to allow plenty of opportunity for self-pace learning (computer-assisted learning) and practice of new ideas through role-playing, skits, videotapes,and other group exercises, including the "buddgy system."

How will you treat clients who are late for meetings or fail to attend training sessions? Be sure to make expectations clear.

How much will you seek to involve family members? Family members are a crucial overlooked asset in job coaching.

THE WORK ADJUSTMENT HIERARCHY

Joblessness is caused by many factors. No assumptions should be made about the degree of work motivation, understanding of the labor market, or job-seeking skills which an individual client possesses. Education and income are not necessarily the best predictors with older adults.

Getting a job is not the end of the process. Many disadvantaged workers leave within the first six weeks because of conflicts with supervisors, inability to get along with co-workers, and inability to exercise initiative.

Even when a job is retained past the first six weeks, many workers do not progress -- do not prepare themselves for promotion, salary increases, or eventual transfer to more interesting or satisfying work. Readiness for change is an important skill among workers of any age.

Any job search assistance program should therefore be thought of in terms of a work adjustment hierarchy which covers the full span from beginning work orientation to longer-term job retention and personal development. The following chart gives a picture of the stages through which all workers must pass in successfully finding, retaining, and growing in the labor market. If there is a failure at any stage, a cycle of continuing failure or lack of development may be created. Problems that prevent success at each level must be attacked throughout the job search assistance process.

JOB ACQUISITION SKILLS

Level I: Work Orientation

- While job-seekers often express the desire for work, this does not mean that clients all believe that work will be rewarding. Many privately think of work as punishing -- and therefore do not seek work vigorously.

Level I: Work Orientation, con't.

- Financial pressures often drive clients to seek any job. Even when work of this kind is found, however, it usually does not contribute much to pride or self esteem. This creates a vicious cycle, where the worker continues to get short term financial benefits but does not take pride in work or himself/herself.
- Work role identification begins with these attitudes:
  - --the feeling that work is valuable
  - --the feeling that one will be accepted by others on the job
  - --the feeling that other people value work
  - --the feeling that good jobs CAN be found
  - --the feeling that one CAN be successful in a good job
- Clients with high work role identification PERSIST IN EFFORT TO FIND WORK AND STAY ON THE JOB, BELIEVE THAT WORKING WILL BE A REWARDING EXPERIENCE, HAVE FRIENDS OR ASSOCIATES WHO ALSO WORK, and SEEK OUT OTHER PEOPLE WHO SHARE THEIR PERCEPTIONS.

Level II: Job Readiness

- People with a positive work orientation will usually hunt for work, but a person must first be ready to seek the right kind of employment. Otherwise, the job-seeker will very likely find the wrong kind of job.
- Job readiness includes:

appropriate educational skills
appropriate work skills
knowledge of self and the world of work
personal maturity

BEST COPY AVAILABLE

- There is no absolute educational standard for beginning job readiness. But lack of skills or basic education may prevent an individual from seeking appropriate employment in a field of his/her choice. Then there is a problem of job readiness.
- Getting to work on time and ability to listen to directions are basic work skills involved in job readiness.
- There must be match between work skills and job requirements.
- There must be a match between personal work needs and how well a job can meet those needs.
- Job-seekers must know what their needs are and how well different jobs can really meet those needs. Accurate information is essential. Often clients expect both too much and too little. They lack information that will allow them to chose the kind of job most likely to be satisfying.

Level III: Job Getting

Getting a job is the LAST step in the acquisition phase.
The clients must be able to present himself/herself in an appropriate way which leads to employment.
This means:

--reviewing relevance of previous experience

--acquiring job interviewing skills

--filling in application forms correctly and completely

--obtaining job interviews

--developing enough confidence to "try out" real-life job interviews

--developing enough confidence to seek jobs in unfamiliar locations or unfamiliar industries

--knowing how to follow-up on job interviews

--taking tests

--appropriate voice, manner, and dress

JOB MAINTENANCE SKILLS

Level IV: Job Conformance and Adaptation

- All work requires conformity, especially regular attendance. (And how to handle those situations when regular attendance is not possible.)
- Other conformity requirements are:
  - dress
  - hygiene
  - language
  - safety regulations
  - use of drugs/cigarettes/alcohol
- Not all conformity requirements are highly visible. Workers must learn to recognize subtle traditions or "unwritten laws."
- Attitudes toward supervision are critical. The worker must learn to respond appropriately to performance demands and performance checks.
- New workers have to learn to accept "hazing."

Level V: Entry Level Performance and Satisfaction with Work Environment

- Once the individual meets conformity requirements and makes a beginning adaptation to work in the first few weeks, other skills become important. One of the most important is the ability to listen and follow directions.
- A second basic skills is the knowledge that when one task is finished, the worker should ask the supervisor what to do next.

Level VI: Interpersonal Relations

- A person will not maintain employment permanently unless interpersonal relations within the job environment are pleasant.

  People must learn how to make friends at work.

Level VII: Skilled Performance and Job Satisfaction

- The ability to work independently without supervision, take initiative, and make decisions is essential for a worker to become a highly valued employee in a permanent work setting.
- This is the highest level in the maintenance group where many people stabilize. They become valuable and valued employees with steady income. Unless something happens to change their situation -- such as industry failure or relocation -- they remain productive and relatively satisfied until retirement.

UPGRADING SKILLS

Level VIII: Orientation for Change

- An attitude should be developed which sees promotion or change to a better job as both possible and advantageous.
- The worker should come to terms with fears about job change.

Level IX: Advancement Readiness

- The worker must develop an awareness of the opportunities available for better jobs, the requirements of those jobs, and the personal skills and abilities the worker can contribute.
- Job training or acquisition of additional education may be necessary.
- The worker should develop a perspective on future job changes and how different types of employment will influence personal life style.

Level X: Job or Promotion Getting

- Active job-seeking and successful interviews are necessary.
- Interviewing skills will be crucial in changing jobs.

WORK ADJUSTMENT HIERARCHY

		LEVEL	TYPE OF FAILURE
(C) UPGRADING GROUP	LEVEL XI	High Level Job Maintenance	Is not promoted and may not be capable of adjusting when job or working conditions change.
	LEVEL X	Job or Promotion Getting	
	LEVEL IX	Advancement Readiness	
	LEVEL VIII	Orientation for Change	
(B) MAINTENANCE GROUP	LEVEL VII	Skilled Performance and Job Satisfaction	Does not enjoy work. Not viewed as one of the better workers
	LEVEL VI	Interpersonal Relations	Unhappy at work or viewed negatively by others, may leave or be dismissed in first 6 months
	LEVEL V	Entry Level Performance and Satisfaction with Work Environment	Fired or quits, usually within probationary period (first few weeks)
	LEVEL IV	Job Conformance and Adaptation	Fired or quits in first few days
(A) ACQUISITION GROUP	LEVEL III	Job Getting	Does not succeed in getting jobs in primary labor market
	LEVEL II	Job Readiness	Does not apply for appropriate entry level jobs
	LEVEL I	Work Orientation	Does not seek out or avoids work

GETTING STARTED

This section explains how you should organize the physical environment, plan program structure, orient clients, and "break the ice" in order to facilitate effective group interaction.

Learning is best accomplished in a businesslike, physically comfortable, well-organized atmosphere. Temperature, light, physical surroundings, learning materials, and technical equipment must be in place, suitable to the client, and show evidence of care. People cannot respond to you if they are bothered by heat or chill, distracted by noise, unable to find lesson materials, or bored by failures in equipment functioning. Most important, you want to set a tone by enthusiasm and welcome, and this is done by more than words alone.

Finding a job can be defeating and anxiety - provoking. Help your clients feel as if they are gaining greater control by stepping into your program. To do this, you have to be in control.

CHECKLIST

Getting Ready for Your Clients

Check

____ Chairs in comfortable grouping around table?

____ Blackboard/flip chart available? (Chalk, pens ready?)

____ "Welcome" written on blackboard or on bulletin board?

____ Pencil and paper for each client?

____ Notebook with pockets available for each client?

____ Coffee, tea or water available?

____ Posters with upbeat mottoes clearly visible?

____ Meeting area located in private, quiet area?

____ Temperature of room comfortable?

____ Name tags ready?

____ Polaroid camera and film on hand?

____ Certificates of completion prepared?

____ Video equipment, video tapes, overhead projector set up and tested?

____ Directions to meeting room at front door and reception area?

____ Receptionist alerted and told how to greet clients?

____ Area for coats, boots, umbrellas set up?

____

____

GUIDELINES FOR INITIAL MEETING

1. Introduce yourself and any other staff or volunteers who will be working in the program. (Include receptionist or other people clients will meet regularly).
2. Explain location of telephone, message board, bathroom, and other facilities clients may need.
3. Name tags or cards for each group member should be prominently displayed.
4. Be sure people are facing each other as much as possible (horseshoe or circular arrangement.)
5. Briefly explain background of the senior Federation and relation to the ______________________ (name of program).
6. Distribute handouts on program structure and expectations and discuss in detail. (Exhibit A, this section).
7. Explain any fees involved in program participation.
8. Distribute counselor-Job-Seeker agreement and ask clients to sign. Client and agency will each keep a copy. (Exhibit B, this section).
9. Discuss involvement and role of family members in the program. Invite spouses, relatives or others who might act as job coaches for the client (Exhibit C, this section).

10. Ask clients to complete the Assessment Form (see evaluation section) and return to you.
11. Complete one "icebreaker" exercise. (Exhibit D, this section.
12. Begin Topic One.

Describing the Programs and Stating Expectations

Clients must know from the beginning of the program:

- the structure of the program (Days, hours) and its relation to the Senior Federation.
- your availability during and after the program (hours, telephone and/or room numbers).
- whta topics will be covered
- what materials they will receive
- what experiences they will have (e.g. role playing)
- what skills, knowledge they will acquire
- what benefits or outcomes they can expect from participating in the program
- what expectations you have of them as a program participant (e.g. be on time, dress as if coming for a job interview).
- rewards, recognition offered during the program
- penalties, if any, for non-conformity.

Structure is crucial to learning successful program outcomes.

PROGRAM STRUCTURE
PLANNING SHEET

Meeting times and Staff

The program will meet for a total of ____________________,
(# weeks)

beginning ________________ and ending ____________________.
(date) (date).

Meetings will be held on ____,
(days of the week)

from ____________________________. The leaders for this program
(hours, a.m. or p.m.

will be __________________________, ____________________________
(Name) (Name)

etc. They may be reached at ___________________, between
(telephone #)

________________________. OPTIONAL: After the program has con-
(hours)

cluded, you are welcome to remain in touch with staff by telephone,

stop by the office on ________________________, between
(days)

______________________.
(hours)

(To Be Given to Clients)

Outline of Program Content

PURPOSE: The purpose of ______________________________
(program name)
is to reduce unemployment of older workers and to help job-seekers find adequately paid, satisfying work.

METHOD: The ______________________ does not place people in
(program name)
jobs. It will improve the job-seeking skills of participants by group discussion, computer-assisted instruction, information about the Minneapolis labor market, and many useful tips on how to succeed in the job search process.

TRAINING CONTENT:

_____ Part I You Can Succeed!!!!
(day)

A. Inventorying Your Best Qualities
_____ B. Reviewing Your Experience
(hours C. Identifying Your Successes
D. Thinking about Health
E. What About Age Discrimination?
F. The Challenge of Job-Seeking

_____ Part II Getting Ready for the Right
(day) Kind of Work

_____ A. Skills Assessment -- What You Can Do/What You Need
(-hours) B. Are you a Good Listener?
C. The Labor Market in Minneapolis/St. Paul - what's available?
D. Social Security and Work-What You Need to Know
E. Matching Your Skills With Available Work.

____ Topic III. Putting Yourself in Writing
day

____ A. Resumes
(hours) B. References
C. Cover Letters
D. Job Applications

____ Topic IV. Finding Interview Opportunities
day

A. The Open Job Market
B. The Hidden Job Market
C. Telephone for an Interview
D. Preparing for an Interview

____ Part V. Succeeding in Your Job Interview
day

A. Practicing Interview Skills
B. Elements of Effective Communication
C. Creating a Positive Impression: Apperance, Manner, and Voice

____ Part VI. Staying and Growing in Your Job
day

____ A. Working with Sueprvisors
(hours) B. Getting Along With Others at Work
C. Dependability and Punctuality
D. When to Discuss Salary and Benefits
E. Listening; Following Instructions; and Using Initiative
F. Job Survival Skills for the Older Workers: Remaining Ready to Change

(To be filled in and handed out to clients)

Your notebooks are organized by topic: This is what you will receive:

Topic One: Can You Succeed?

-
-
-

Topic Two: Getting Ready For The Right Kind of Work

-
-
-

Topic Three: Putting Yourself in Writing

-
-
-

Topic Four: Finding Interview Opportunities

-
-
-

Topic Five: Succeeding in Your Interview

-
-
-

Topic Six: Staying and Growing in Your Job

-
-
-

(To be handed out to clients)

What You Will Gain
From This Program

When you have finished the ________________________________,
(program name)

you will be able to:

- Present Yourself Effectively
- Locate Job Opportunities
- Understand the Labor Market and Your Potential in It.

You will

- find MORE job opportunities
- find work MORE quickly
- find work you ENJOY
- renew your confidence

(To be handed out to clients)

Your Successes

Job finding is hard work. Sticking with a program like ours takes work, too. We wish to recognize your efforts by:

- awarding a certificate when you complete ______ sessions.
- putting your name in the Hall of Success (our clients who found work within 30 days).
-
-

(To be handed out to clients)

Expectations of Participants

in ______________________
(program name)

In order to succeed in your job hunt, you will need to learn and practice skills in this program. To achieve this goal, we ask that you do the following:

1. Complete assignments for practice or new learning.
2. Arrive on time for each session.
3. Dress for these meetings as you would for a job interview.
4.
5.

Client/Counselor Contracts

Some job search assistance programs use client/counselor contracts, which both parties sign, as a way of gaining commitment to program outcomes. The contracts also make clear what the client may -- and may not--have a right to expect from the counselor. Two examples of client/counselor contracts are found on the following pages and might be usefully adapted for the Senior Federation. One is used at Operation Able in Chicago, and the other was developed at the University of Illinois.

CONTRACT FOR JOB-SEEKING SUCCESS

In this program, volunteer leaders and staff will assume the following duties:

1. ______________________________
2. ______________________________
3. ______________________________
4. ______________________________
5. ______________________________
6. ______________________________
7. ______________________________
8. ______________________________
9. ______________________________

In this program, clients will assume the following responsibilities:

1. ______________________________
2. ______________________________
3. ______________________________
4. ______________________________
5. ______________________________
6. ______________________________
7. ______________________________
8. ______________________________
9. ______________________________

As a volunteer leader or staff member, I hereby agree to do everything possible to fulfill the duties listed above.

____

(Staff/Volunteer Leader signature)

As a participant in this program, I hereby agree to do everything possible to fulfill the responsibilities listed above.

____

(Participant signature and address/telephone number)

EXAMPLE FROM OPERATION ABLE JOB CLUB (CHICAGO

COUNSELOR-JOB SEEKERS AGREEMENT

Duties of the counselor. The principal duty of the counselor is to help you obtain a job.

The specific services of the leader are:

1. To provide you with job leads that were obtained by previous job seekers.
2. To provide necessary photocopying service of letters of recommendation, applications, resumés, and other job-seeking material.
3. To provide a telephone for your use.
4. To provide typing service if necessary for your resumé and job-seeking letters.
5. To provide you each day with the necessary newspapers, containing help wanted ads, telephone books, and listings of job openings from many sources.
6. To provide you with job interview practice and information on how to answer common questions.
7. To provide you with the specific statements you should make on the telephone when asking about a job and to arrange practice and discussion of these calls.
8. To provide you with forms for keeping track of your job leads and interviews.
9. To help you write a resumé.
10. To provide you with a sample letter and assistance in writing to people about jobs.
11. To provide time every day in his schedule to help you until you have a job.
12. To provide you with continued help if you return after having lost a job.
13. To answer all questions you have on how to improve your job-finding chances.
14. To encourage the other job seekers to keep a lookout for jobs of interest to you.
15. To provide a work space for you in the office to write letters, make calls, etc.
16. To always be ready to assist you during the scheduled sessions.

Duties of the Job Seeker. The principal duty of the job seeker is to carry out the instructions of the counselor quickly and completely and to consider the job search as a full-time job.

The specific duties of the job seeker are:

1. To attend the meetings each day and to be on time.
2. To call beforehand if you absolutely cannot attend a meeting so the leader can give you any new job leads that have come up.
3. To carry out home assignments that may be given, such as obtaining letters of recommendation, visiting an employer, or contacting friends or relatives.
4. To attend all scheduled interviews on time, and to fill out the after interview checklist immediately after the interview.
5. To rearrange your home schedule so that your entire day can be spent on the job search.
6. During the sessions, to help others in their job search just as they help you.
7. To be honest with the leader so he can know how to help you solve any special problems.
8. To keep a lookout for job leads that may be useful to other clients just as they do for you.
9. To notify the counselor and to reply to the follow-up letters or calls, which will be made for follow-up information on your job situation, when you have obtained a job.
10. To give the counselor your list of the job leads to help other job seekers and to reply to requests for job leads you may hear about when you have obtained a job.

As counselor of the Job Club, I hereby agree to do everything possible to provide the services listed above.

Job Club Counselor's Signature

As a member of the Job Club, I hereby agree to do everything possible to perform the activities listed above.

Job Seeker's Signature

CONTACTS WITH FAMILIES

Families and friends can play a crucial role in promoting the success of job-seeking efforts. For a long-term unemployed family member, the new routine of job-seeking can be unexpectedly disruptive and unintentionally undermined by spouse, relatives, or children. Sometimes spouses blame their mate for job loss and contribute to an atmosphere of depression or anxiety in the home. Even those relatives who would like to be as helpful as possible often understand little about the job-seeking process or how they might best contribute.

There are several ways of involving family members. First, relatives can be encouraged to participate in job search assistance sessions. Separate meetings can be held to explore the role of wives, husbands, other relatives, and children. Family members can be notified about the participation of a relative in the program. (See accompanying letter used by Operation Able).

While it has been customary to treat job-seeking as the sole responsibility of the unemployed person, this does in fact reinforce the isolation that unemployed people often feel. And remember...the family can provide long-term support and energy for the job-seeker, while the agency's program is by definition time-limited.

EXAMPLE FROM OPERATION ABLE, CHICAGO

FAMILY SUPPORT LETTER

Job Club Program
1000 Washington St.
Anywhere, U. S. A. 01234
Phone 111-222-3333

Dear________________________________

______________________________has recently enrolled in the intensive job search program of this agency. In this program, the job seekers spend their entire working day obtaining job leads, writing letters, contacting employers, practicing interview procedures, going to interviews, writing job descriptions, and other similar tasks.

Job-Finding success is almost assured in this program for every member who continues to attend the sessions and who performs these job search activities.

What can be done by the family or household members to help? The family and household members of the job seeker can help in several ways:

Daily Sessions The job seeker must be free to attend the job search sessions each day. The family can help by not allowing other activities or chores to interfere with this attendance.

Assignments at Night The job seeker often must call or visit people and companies in the evening to obtain job leads or to be interviewed. Evening hours should be kept free for such contacts.

Telephone The job seeker will be receiving telephone calls from friends and employers regarding interviews, job openings; and job offers. It is important that telephone used by others be kept at a minimum so the line will not be busy when an employer calls. Also, it is important that whoever answers the phone writes down the name and telephone number of all persons calling for the job seeker.

Family Car If a family car is shared, arrangements should be made so that the car is available for the job seeker's use to get both to this office and to interviews.

Job Leads One of the best sources of job leads are family members who learn of possible job openings from their work and friends. The family members should keep alert for possible hiring situations and even ask other people about job openings.

Family members often desire further information about the nature of the program and information as to what they might do to help even more.

Please do not hesitate to call us for any further information at the telephone number listed at the top of this letter. Or ask the job seeker to have us call you.

We will be doing everything possible to help job seekers obtain a job and we find that the more their family understands what they are doing, the more they can help.

Sincerely,

Jane Doe, Job Club Counselor

Breaking The Ice

How people get to know each other in your group is very important. Their first impressions will persist and affect the way people interact for as long as you meet.

Getting acquainted icebreakers may help people to work with each other more objectively and responsibly. The more relaxed people feel around each other, the better their receptivity to learning and new ideas.

These icebreakers also serve another important function. They can help build cohesiveness and increase mutual familiarity without "getting too personal."

FINDERS

Activity Summary

This exercise helps the participants become better acquainted as they match their perceptions or impressions of their fellow participants to a list of descriptive statements.

Time: Approximately 20 to 25 minutes.

Group Size: 10 to 20 participants.

Preparation:

Space Required: A room large enough to permit unrestricted movement of learners.

Materials Needed: For each participant, a pencil and a copy of the Finder's Sheet (see attachment)

Procedures:

1. The trainer begins by explaining that the group members will be taking part in an exercise that is designed to help them become better acquainted with one another.
2. Next the group leader gives each participant a pencil and a copy of the Finder's Sheet.
3. The participants are then instructed to stand up, mill around the room, and locate, based upon their perceptions or impressions, a person that fits each of the descriptions given in the Finder's Sheet.
4. At each "finding," the participant introduces himself or herself to that person and explains what description the person fits. For example: "You appear to fit item #1 on the Finder's Sheet in that you seem to be someone who enjoys children; you have soft, gentle eyes. My name is Carolyn Brown. What is your name?...Thank you." The participant writes that person's name next to the appropriate description and then moves on to seek another "finding."

5. When the participants have completed their Finder's Sheets, they are to introduce themselves to all of the other participants they have not as yet met.

Variations The group leader may formulate a Finder's Sheet that focuses on work-related characteristics. For example: Find someone who appears to be a flexible supervisor; find someone who looks as if he or she works well with others; find someone who seems to be efficient.

If the group contains fewer than 15 members, the trainer may ask each participant to explain to the entire group his or her choice for each category on the Finder's Sheet.

FINDER'S SHEET

1. Find someone who looks as if he or she like to work with machines.

   Name:________________________________

2. Find someone who looks as if he or she is easy-going.

   Name:________________________________

3. Find someone who looks as if he or she is concerned about details and is conscientious.

   Name:________________________________

4. Find someone who looks as if he or she is ambitious.

   Name:________________________________

5. Find someone who looks as if he or she likes to lead people.

   Name:________________________________

6. Find someone who looks as if he or she likes owrk with others.

   Name:________________________________

7. Find someone who looks as if he or she is an interesting conversationalist.

   Name:________________________________

8. Find someone who looks as if he or she enjoys exercising.

   Name:________________________________

9. Find someone who looks sophisticated.

   Name:________________________________

10. Find someone who looks intelligent.

    Name:________________________________

Icebreaking Exercises - 1st Day

Showing Personalities

Activity Summary

This exercise asks the participants to introduce themselves by naming colors, cars, and fictional characters that represent aspects of their own personalities.

Preparation:

Time: Approximately 15 to 20 minutes.

Group Size: 10 to 20 participants.

Space Required: A room that is large enough to accommodate the comfortable seating of the participants.

Materials Needed: For each participant, a pencil and a piece of paper.

Procedures

1. While distributing paper and pencils to participants, the trainer explains that the activity is designed to help them become acquainted with one another.

2. The leader then asks that each participant write his or her name on the piece of paper. Under his or her name each participant is to write a color which he or she feels fits his or her personality. Beneath the color the participant is to write the name of a fictional character with whom he or she identifies.

3. Then, one at a time, the group members introduce themselves by stating their names, colors, cars, and fictional characters. In the introduction, each participant is to provide a brief rationale for each of his or her three choices. For example: "I see myself as a Volkswagen because I am practical and am concerned about economic factors."

4. The exercise continues until all the participants have introduced themselves by color, car, and character.

Variations

If the group contains more than 20 participants, the trainer may ask the group members to give only one description of themselves, such as their relation to a particular color, car or character.

The group leader may request that the participants relate themselves to various kinds of insects, flowers, foods, games, film stars, political figures, or any combination of these.

The trainer may ask that each participant give his or her name and then act out one or all of the chosen descriptions while the other group members attempt to guess the particular color, car, or fictional character he or she has selected.

SESSION II

GETTING READY FOR THE RIGHT KIND OF WORK

OBJECTIVES:
- Help job-seeker understand occupational alternatives
- Intensify personal assessment of job needs, skills
- Develop research orientation toward job search process
- Improvement understanding of occupational requirements
- Improve readiness for test-taking
- Set Job Targets

SECOND SESSION

Getting Ready for the Right Kind of Work

6-8 participants

9:00 - 9:20 Overview (Group leader)

- Review of people's names (hand out new tags if necessary)
- Invite questions
- Discuss homework assignment: how would people summarize their strengths?
- Review purpose/objectives of today's session

  Hand out agenda

- Discuss how today's session will relate to next session

9:20 - 9:35 - Depending on group dynamics, consider another "Icebreaker" exercise

OR

Break into
Groups A & B

Second Session

9:35 - 10:30

Group A PLATO/self-paced exercises		Group B Classroom
3-4 persons PLATO 2 persons 25 minutes PLATO: "How to Search for a Job" continue with CIS; use QUEST to generate list of occupations Look at General Occupational Tables to see "job families" Rotate	9:35 - 9:45	Begin with "Taking a Chance" exercise Discuss group's feelings about taking a risk in seeking work. What risks are involved? How do we handle our feelings?
	9:45 - 9:55	Aptitude Testing Practice taking test. Compare answers. How did people feel?
Rotate Self-paced exercises 1-2 persons 30 minutes Look at Occupational Outlook Handbook or Exploring Careers Adapt "Ideal Job"exercise to 1, 2 persons. Compare with occupations described in Occupational Handbook.	9:55 - 10:05	Job Targetting Work on "Questions to Ask Yourself When Researching an Employer especially #5 Compare definitions
	10:05 - 10:25	GUEST from Labor Dept to discuss high demand occupations in region
	10:25 - 10:30	Summary

Second Session

10:30 - 10:45	Break
10:45 - 11:45	Repeat, except begin classroom session with presentation by guest
11:45 - 12:00	Wrap up Reemphasize importance of matching you with a targetted job. Ask group to discuss their job targets. Summarize next day's content. Evaluation Overnight assignment

Homework: Finish filling out Work Experience File forms for all relevant employment (keeping job targets and high demand occupations in mind).

SESSION III

PUTTING YOURSELF IN WRITING

OBJECTIVES: The client now begins to work on specific techniques for obtaining a job interview:

Resume preparation
Obtaining references
Writing cover letters
Completing job applications

Session III

Putting Yourself in Writing

9:00 - 9:10 a.m.	Round of introductions Round of job targets Briefly discuss "ideal jobs" and job targets--how well do they match?

Group A	Group B
PLATO/self-paced exercises 3-4 persons 9:10-10:15	Classroom 3-4 persons 9:10 - 10:15
PLATO "Resume Lesson" 1st draft "How to Fill Out a Job Application"	9:10 - 9:25 Review rules for writing resumes, and types of resumes. Hand out examples 9:25 - 9:50 Fill out sample resume form 9:50 - 10:15 Discuss resumes in relation to individual job targets and experience.
Self-paced Exercises Develop list of references Take daily newspaper, pick a want ad, and write a responding cover letter. (Follow cover letter form) Fill out sample job application form	

Session III

10:35 - 10:30 Break

10:30 - 11:35 Repeat, except second group brings draft of resume from PLATO for discussion

11:35 - 11:50 Wrap-up

Summary of next session

Evaluation

Overnight assignments

Review of personal goals--are we sticking with it?

Overnight assignment:

Make revisions to resumes as needed; draft 2 versions, one for each of 2 job targets

Alternatively, correct errors on job application form.

Review resume checklist

SESSION IV

FINDING INTERVIEW OPPORTUNITIES

OBJECTIVES: The job-seeker will learn the following skills:

- How to identify jobs in the Open Job Market
- How to search the Hidden Job Market
- Telephone techniques to use in requesting a job interview
- Preparing for the job interview

Session IV

Finding Interview Opportunities

9:00 - 9:25 a.m Overview of session content

Discussion of resumes and job applications; review of principles

Group A 9:15 - 10:15 3-4 persons	Group B 9:15 - 10:15 3-4 persons
PLATO 30 minutes "Where to Look for Jobs" "How to Read the Want Ads"	9:15 - 9:35 Classroom 60 minutes The Open Job Market - Have copies of daily newspaper for everyone - Review want ads and give several pointers - Sample exercises of want ad abbreviations - Have clients identify 2 employers/ads
Self-paced exercises 30 minutes Writing your own "Job Wanted" ad Make list of Sources of Employment Analyze fears--fill out sheet on "Fear"	9:35 - 9:50 Discuss private and public employment agencies Hand out sample contract 9:50 - 10:35 The Hidden Job Market Bring telephone directories and follow list of suggestions for identifying job leads Discuss how to use friends, relatives former employers

Session IV

10:15 - 10:30 Break

10:30 - 11:30 Repeat Topics

11:30 - 12:00 Convene as a group

Discuss traditional (open job market) and non-traditional (hidden job market) approaches.

What experiences have people had?

Hand out "Telephone Reminder List for Calling"

Hand out and discuss "Telephone Techniques"

Hand out "Things to Include in First Contact with Employer on the Telephone"

Hand out "Leads List"

Evaluation

Overnight Assignment: Read through "Interview Checklist" and come to next session prepared to role play in interview with an employer in your targetted job area.

SESSION V

SUCCEEDING IN YOUR JOB INTERVIEW

OBJECTIVES: Job Seekers will learn specific techniques which will improve the likelihood of a successful job interview:

How to listen

How to anticipate interview's behavior and questions, interviewer types

How to project a positive image

Self-review

Dress, manner and voice -- using them appropriately

Session V

Succeeding in Your Job Interview

9:00 - 9:10 Overview of content and objectives for today's session

Respond to questions

9:10 - 9:30 Distribute script for "cold calls." Pick 2 people to enact script.

Discuss feelings about this approach and how to handle refusals

---

PLATO
9:30 - 10:00

Desensitization program

Review resume writing, add new drafts

Review CIS/do QUEST

Other, as assigned

Rotate

Rotate

Self-paced exercises
9:30-10:00

Take 2 targetted jobs.

Review questions--"Will You Fit in?" "Are You Dependable?" "Do You Have the Skills?"

Review Interviewing Practice script

Watch Interviewing videotape

CLASSROOM
9:30 - 10:30

General discussion:

1. What good/bad interview experiences have people had?
2. What makes for a good interview?
3. What can the client control?

Go over tips for active listening

Role play as many practice interviews as possible and discuss

Each client fills out self evaluation

Session V

10:35 - 10:45	Coffeebreak
10:45 - 11:45	Repeat Topics
11:45 - 12:00	Wrap-up Evaluation Overnight Assignment

Overnight Assignment: Develop a list of the four most likely reasons an interview may fail. Give the four most likely reasons an interview may succeed.

SESSION VI

RETAINING YOUR JOB AND DEVELOPING

OBJECTIVES: Job-seekers should gain greater understanding of:

How they handle interpersonal relationships on the job

What employers expect from employees

How to respond to supervision; how to follow instructions

Why people lose jobs and what makes an effective employee

Time management

Session VI

Retaining Your Job and Developing In It

9:00 - 9:05	Overview of Session Objectives
9:05 - 9:20	Discussion of assignment Review grooming principles, if no one mentioned them
9:20 - 9:50	Case Exercise: Isabel. Discuss implications (nearly all will be willing to fire a perfectly good worker for low conformity.)

9:50 - 10:20	
PLATO Unassigned/open-relative to individual needs	Time management Exercise Discuss: How will people organize their time beginning today to continue their job search? at work? Hand out: "Job Expectations--What the Employer Expects"
Self-paced exercises Final resume drafts Fill out "Some Facts About How I Get Along With Others"	

Session VI

10:20 - 10:35 Break

10:35 - 11:05 Repeat topics

11:05 - 11:45 Meet as a group

- Summarize main steps which have been followed
- Role play a "cold call," in-person interview for a job, or final negotiation for salary (after hiring decision has been made), depending on progress of group
- Explain program follow-up plans (e.g. availability of individual counseling plans for group meeting, availability of PLATO for individual basic skills, GED, or vocational lessons)
- Bring in successful job-seeker, if possible, to wish them well
- Give certificates of completion
- Administer final evaluation

APPENDIX 5

EXCERPTS FROM TRAINING MANUAL FOR CAI-SUPPORTED EMPLOYABILITY SKILLS PROGRAMMING

```
   1/11/84     9:23 AM      RHEA BERTELLI          ABLE        CERL
*THOUGHTS ON THE RESUME LESSON. *WITHOUT A PRINTER THE
RESUME LESSON SHOULD BE REVISED SO THAT THE CLIENT HAS
A PRINTED FORM AND PLACES TO WRITE THE APPROPRIATE INFOR=
MATION.  *TAKING TIME TO WRITE HIS NAME, ADDRESS, SCHOOL
ADDRESS, ETC. MEANS THAT MANY STUDENTS WHO STRUGGLE JUST
TO TYPE ANYTHING, SPEND INNORDINATE AMOUNT OF TIME JUST
ENTERING IN WHAT AMOUNTS TO USELESS DATA.  *THE OTHER AS=
PECTS OF THE LESSON==THE GENERALIZATIONS, ARE EXCELLENT
AND WELL WORTH HAVING THEM EXAMINE.  *THE REACTIONS OF THE
PEOPLE WE WORKED WITH YESTERDAY DO TESTIFY TO THAT.  *PLATO
CAN BE A POWERFUL REINFORCER.
*QUESTION*;  *CAN THIS LESSON BE REDESIGNED WITH EMPHASIS ON
THE GENERALIZATIONS WHERE A PIECE OF PAPER USED WITH IT
SERVES TO ORGANIZE THE DATA*/  *ACTUALLY, THE FORMAT FOR THE
RESUME WHICH IS PRESENTED IN THIS LESSON IS VERY STERILE
AND DOES NOT REFLECT THE NEWEST THINKING OF THE FUNCTIONAL
PRESENTATION.  *ALSO, ANY PRESENTATION THAT WILL ACTUALLY BE
USED NEEDS GOOD QUALITY TYPING SKILLS, WHITE SPACE AND
INDENTATIONS. ETC.  *THIS CANNOT BE PRODUCED ON *PLATO BUT
NEEDS A GOOD CREATIVE TYPIST.

----------------------------------------------------------- RESPONSE    1
   1/11/84     11:30 AM     FLYNN                  CETA        CERL

WE HAVE STARTED WORK ON REVISION OF THE RESUME LESSON.
THE PLAN IS TO MAKE THE MOST SIMPLE CHANGES FIRST --


E.G. DELETING UNNECESSARY INFORMATION REQUIREMENTS.  THE
NEXT STEP WILL BE TO MAKE MAJOR PROGRAMMING REVISIONS,
AND IT WOULD SEEM EXTREMELY USEFUL TO DEVELOP A VERSION
WHICH CAN BE USED WITH -- OR WITHOUT -- A PRINTER.

I WILL NEED SOME ELABORATION  ON THE COMMENT THAT THE
LESSON IS *.STERILE.*,  THIS DOESN*7T TAKE ME TOO FAR IN
TERMS OF SUBSTANTIVE REVISIONS WHICH MIGHT BE USEFUL.
WOULD YOU ELABORATE MORE ON WHAT YOU HAVE IN MIND*/

----------------------------------------------------------- RESPONSE    2
   1/11/84     11:31 AM     FLYNN                  CETA        CERL

ALSO...THANKS FOR THE GOOD INPUT...KEEP IT COMING, AND
WE*7LL KEEP TRYING....
```

____ software
____ content
____ hardware
____ other

OPERATION ABLE
Term Comment Log

File Name: PASRUN

Note No.: 269

Note Name: rwriting

Date:

Time:

Person/Grp.:

Lesson:

Unit:

Site:

```
---------------                  ------------------------------------------
   4/26/84     4:32 pm     rhea                    able        cerl
lesson: rwriting   unit: question   site: pasr  27-2
it is strongly recommended by most employment people NOT
to have references printed on the resume itself but rather
to have the sentence added to the resume page

available on request
----------------------------------------------------------------- response   1
   4/27/84     10:04 am    larson                  pasr        cerl
I don't get this comment...she is on the page that asks
if she would like to have her references printed on the
resume or have available upon request printed there...
----------------------------------------------------------------- response   2
   4/30/84     9:17 am     dibello                 pasr        cerl

bonnie...should we put that statement on that page...ie
"It is strongly recommended by most ?????? that references
not be included with the resume but be offered on request."?
```

(continued note string)

-- response 3

5/2/84 2:45 pm bonnie pasr cerl

what i have read and seen about putting references on resumes favors leaving them off and having seperate page as rhea says. however this tends to refer more to pmt type workers. low-income workers i think is another situation. i'm sure gladys knight prefers putting them on the resume and what i've gathered from lynda that`this might be a preferred method for low-skilled, low-income people.

-- response 4

5/2/84 3:47 pm dibello pasr cerl

maybe a message like that could go into the lesson "Talk to your counselor about whether to include references with your resume or make them available on request. This depends on the type of work you are applying for.

??...this sounds a little thin

-- response 5

5/3/84 3:52 pm flynn ceta cerl

ai like the idea

(continued note string)

BLANK PAGE

BLANK PAGE

BLANK PAGE

______ software
______ content
______ hardware
______ other

OPERATION ABLE
Term Comment Log

File Name: PASRLN
Note No.: 263
Note Name: rwriting

Date:
Time:
Person/Grp.:

Lesson:
Unit:
Site:

```
--------------------------------------------------
4/26/84     4:19 pm     rhea     1441     able     cerl
--------------------------------------------------

lesson: rwriting   unit: schorder   site: pasr  27-2

This page, too is inappropriate for older persons, can
this section be bypassed if over 23??

------------------------------------------------------------ response   1
   4/30/84     9:12 am     dibello                pasr      cerl

we dont want an automatic bypass since you may have a 39-
year old woman with a brand new MBA etc...but a message
may help to make this page less threatening and problematic

------------------------------------------------------------ response   2
   4/30/84     10:30 am    flynn                  ceta      cerl
since when is the cut-off for old age 23?
```

(continued note string)

```
------------------------------------------------------------- response    3
    4/30/84      10:34 am      larson                  pasr        cerl

that was the age determined for the people that went to
the teenage branch of the lesson, and for those that went
to the older worker section of the branch.


arbitrary I think.
------------------------------------------------------------- response    4
    4/30/84       2:15 pm      dibello                 pasr        cerl

marilyn...bonnie has a paper design of the branching that
you can look at
------------------------------------------------------------- response    5
    5/2/84        2:16 pm      bonnie                  pasr        cerl

rhea seems to be objecting to the unit in which the order
of educational background is listed on resume. the lesson
explains that the most recent education should go first.
i thought this was a  worthwhile point as it is contrary to
to listing  in chronological order (past - recent).
------------------------------------------------------------- response    6
    5/2/84        2:20 pm      bonnie                  pasr        cerl

a note about 23 years (which is abritrary ) :  the lesson
was redesigned to seperate teenage and college-aged
clients from adult clients or clients that have been
working.
```

(end note string)

☑ software
☐ content
☐ hardware
☐ other

①

OPERATION ABLE
Term Comment Log

File Name: ctanote
Note No.: 55
Note Name: JOBAPPL

Date:
Time:
Person/Grp.:

Lesson:
Unit:
Site:

```
------------------------------------------------------------------------
    1/17/84      8:38 AM      RHEA BERTELLI          ABLE         CERL

LESSON°; JOBAPPL   UNIT°; BEGIN   SITE°; PASR  27-0

WOULD IT BE POSSIBLE TO INCREASE THE ACCEPTABLE RESPONSES
HERE TO INCLUDE SPECIFIC RELATIVES==SON, DAUGHTER, MOTHER
ETC.  °WE HAVE LOST SOME TIME WITH; OUR ADULTS WHO FUMBLE
AROUND.  °SOMETIMES THE ANSWER IS A PROPER NAME OR EVEN
NUMBER.°WOULD YOU CONSIDER REDESIGNI;NG THE ANSWER TO BE
°IF YOU DON°7T HAVE A TELEPHONE WHAT WOULC YOU DO°/ AND
LIST A SERIES OF ALTERNATIVE MULTIPLE CHOICES°/  °IN THIS
WAY THIS LESSON ALSO REINFORCES °RESUME AND THAT IS ALWAYS
A POSITIVE EXPERIENCE.

------------------------------------------------------ RESPONSE    1
    1/23/84      10:55 AM     DIBELLO                PASR         CERL

BONNIE...COULD YOU CHECK ON THIS AND EXPLAIN IT TO ME°/..
THANKS...
```

(continued note string)

```
------------------------------------------------------------- RESPONSE    2
    2/1/84      10:43 AM      BONNIE                    PASR        CERL

LOU...HAVE CHECKED THIS.  I HAVE AN IDEA FOR REDESIGNING
AS RHEA MENTIONS.  THIS COMMENT IS LOCATED IN *BLOCK 2-A
= BEGIN, SPACE 147.
```

____ software
__✓__ content
____ hardware
____ other

OPERATION ABLE
Term Comment Log

File Name: Cetanote
Note No.: 80
Note Name: JOBAPPL
Date:
Time:
Person/Grp.:
Lesson:
Unit:
Site:

```
 ------------------------------------------------------------------
    2/7/84      3:12 PM      ELEANOR PERRY          ABLE    !   CERL
 LESSON*; JOBAPPL   UNIT*; BEGIN.  SITE*; PASR  27-2
 A DAUGHTER OR SON SHOULD BE ACCEPTABLE
 ----- -  ---------------------------------------- -      --------
```

(continued note string)

288.

OPERATION ABLE
Term Comment Log

		______ software ______ content ______ hardware ______ other ?!
File Name: Cefauote	Note No.: 139	Note Name: jappl
Date:	Time:	Person/Grp.:
Lesson:	Unit:	Site:

```
------------------------------------------------------------------
   3/9/84        9:50 am      jeanne aronson       able       cerl
lesson: jobappl    unit: begin   site: casr  27-2
suggest there should be multiple choice.  sometimes
brings personal name causing confusion!
```

(continued note string)

289

BEST COPY AVAILABLE

___ software
_✓_ content
___ hardware
___ other

OPERATION ABLE
Term Comment Log

File Name: cetanote
Note No.: 157
Note Name: njobappl

Date:
Time:
Person/Grp.:

Lesson:
Unit:
Site:

```
-----------------------------------------------------------------------
   3/22/84     10:52 am     frank hall              able        cerl
lesson: njobappl   unit: begin   site: pasr  27-0
Good show.  Now user has the task of trying to isolate one
of the choices.  Upshot of exercise will be very positive
when realization that all are good sets in.
-------------------------
```

(continued note string)

291

```
                              ---------------- ------------------
   4/12/84     1:31 pm     bonnie                  pasr       cerl

We are about ready to put the new version of lesson jobappl
up for client use. I invite you to make term-comments on
the new version of the lesson -- njobappl.

----------------------------------------------------------- response   1
   4/16/84     10:52 am    dibello                 pasr       cerl

note the leading "n"...

you can see "njobappl" by going to your "p" option and
typing "njobappl" and then pressing NEXT...

----------------------------------------------------------- response   2
   4/16/84     2:33 pm     rhea bartelli           ablea      cerl

Just started reviewing again and 1) lesson is only partially
on screen.  Please put all of it together so that it can
be reviewed as a piece.
Is there space to deal with volunteer activities that could
also be another way to get to skills and experience.  I
do not recall mention of this in the original job applicatio
lesson.
```

(continued note string)

```
---------------------------------------------------------- response    3
    4/17/84     12:57 pm      flynn                   ceta       cerl

not sure what the problem is here.

lou???

brian???

bonnie???
---------------------------------------------------------- response    4
    4/17/84      1:39 pm      larson                  pasr       cerl

I think I have fixed what she is talking about.  she
referenced a blank screen that has been taken care, that
is probably what she is refering to.
---------------------------------------------------------- response    5
    4/17/84      3:58 pm      dibello                 pasr       cerl


rhea...try this again and let us know if there are still
problems...
         -------                    -----------------------------------
```